



ACO Solutions for Urban Development

Helping to create safe and sustainable urban environment



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ACO Group

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ACO. we care for water

ACO is a Water-Tech company that protects water. Building on our global drainage expertise that protects people from water, we increasingly see our mission as also protecting water from people.

With the ACO WaterCycle, ACO provides systems that collect and channel, clean, retain and ultimately reuse water. In this way, ACO contributes to the preservation of clean groundwater as a vital resource, and makes a contribution to tomorrow's world. In its Agenda 2030, the UN global community set the improvement of water quality as one of 17 sustainable development goals.

Intelligent drainage systems from ACO increasingly use smart technology to ensure that rainwater and wastewater are drained, or temporarily stored. With innovative separation and filter technology, we prevent water contamination by pollutants such as fat and grease, fuels, heavy metals and microplastics.

Today, ACO goes one step further: we accept the challenge of reusing water, and thus establishing a resource-saving cycle. For all products and systems, ACO attaches great importance to durability, reusability and a low carbon footprint. The pursuit of sustainability is an ongoing process that we strive to meet every day.

The ACO Group is a global family business that is one of the world market leaders in the Water-Tech segment. Founded in Schleswig-Holstein in 1946, it operates as a transnational network in over 50 countries. Worldwide, ACO is characterised by a high level of decentralised ownership, and explicit regional market proximity.



5.400

Employees in more than 50
countries around the world
(Europe, North and South
America, Asia, Australia, Africa)



1.14 Billion

Euro Sales in 2023



Holder
Iver and Hans-Julius Ahlmann



Headquarters of the ACO Group
in Rendsburg/Büdeltsdorf



ACO Academy
for practical training



The background of the slide is a photograph of a construction site. In the foreground, a person's hand is visible holding a large, light-colored blueprint or set of plans. The blueprint has some faint lines and a small red checkmark. In the background, there is a large blue container, possibly a water tank or storage container, and some construction equipment. The sky is overcast with grey clouds.

How can ACO Group help?

ACO is an innovation driver in all areas of modern surface water management.

The variety of solutions for urban areas offered by ACO holds advantages for municipalities, designers, and contractors, as well as for maintenance companies.

Our wide range of products provides solutions to all functional and aesthetic water management requirements.

The ACO's engineering team takes an individual approach to projects and is available to assist at every stage of design, construction and maintenance.



ACO Academy

The ACO Academy's main goal is to serve as a resource and a platform for all participants in the investment and construction process.

Here, you can learn about the latest practices, projects, norms

and standards, both from our colleagues and from international experts. By creating an open door atmosphere, we encourage personal and group creative contacts and discussions so that together we can solve challenges, find new opportunities and

apply the latest innovations to the development of modern and secure urban environment.

ACO's services - another advantage for sustainable system solutions



Information and training

- Global trends
- Sustainable solutions
- Innovations
- Product training
- European standards
- Local regulations



Design and optimisation

- System solutions
- Product and installation details
- Hydraulic and static calculations
- Specifications
- Value engineering
- European standards and local regulations



On-site support

- Project supervision
- Installation training
- Installation instructions
- Technical documentation



Monitoring and service

- Project supervision
- Maintenance training
- Maintenance instructions
- Commissioning and service
- Warranty Service



1



Urban Trees

Heat periods with extreme drought, followed by heavy rain events and floods: climate change is not a future scenario, but an acute reality. People in cities in particular are suffering from the consequences of global warming. Due to increasing sealing, it is becoming particularly hot in metropolitan areas. Urban heat islands are emerging. At the same time, the risk of flooding increases because precipitation does not seep away on sealed surfaces and the sewage system reaches its limits.

One of the simplest and most effective means of combating the consequences of climate change are urban trees. They filter and cool the air, they absorb CO₂, provide shade and absorb a lot of water through their strong root system. But city trees have a hard time. In order to protect them against long dry periods, insufficient root space and severe soil compaction, the principle of the sponge city for trees was developed.

Urban trees and their functions

Stress relief

City trees have been proven to have a positive effect on the human psyche. Green promotes the well-being of city dwellers and helps reduce stress.



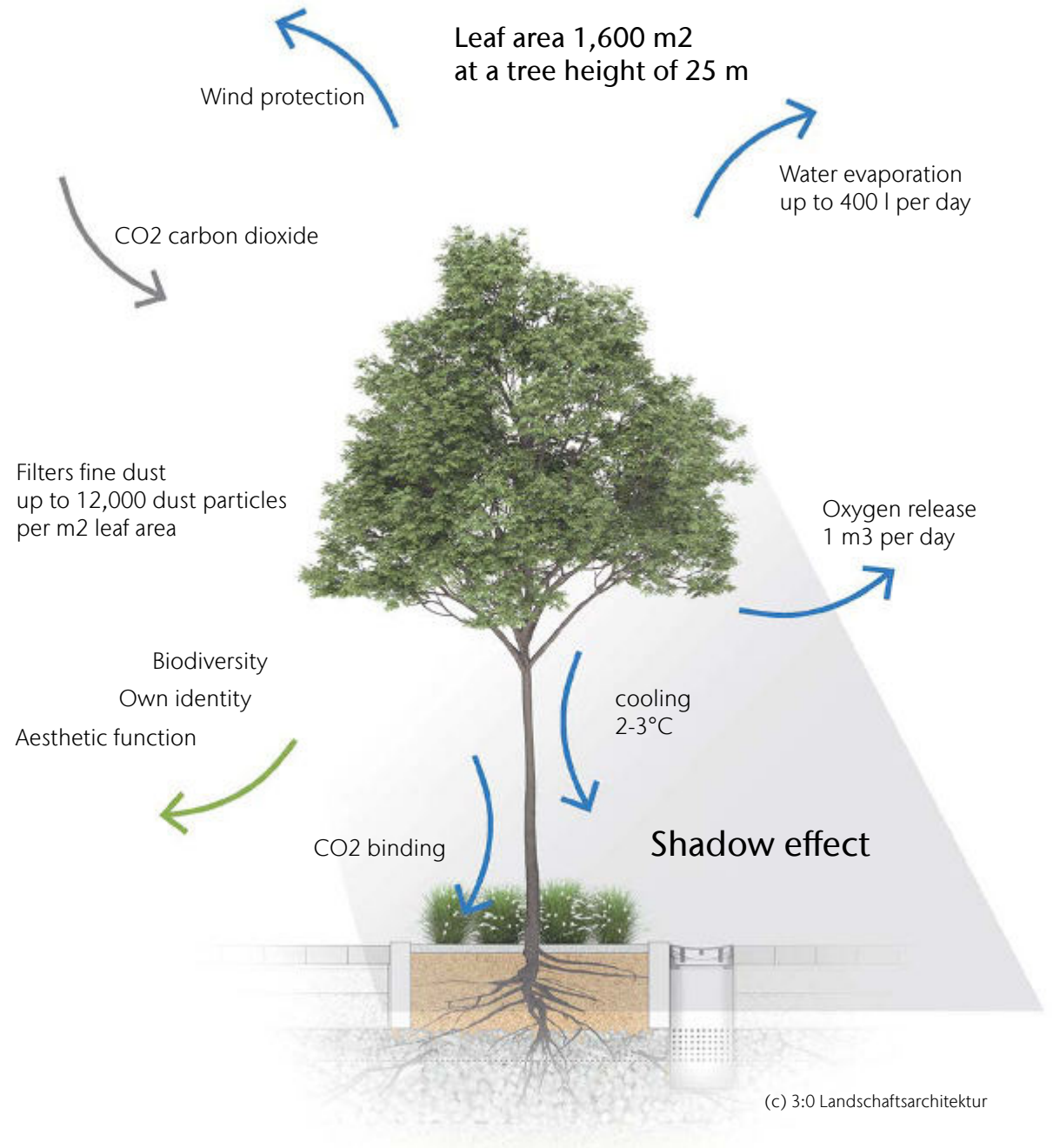
Biodiversity

City trees play a key role in biodiversity in urban regions. They are a habitat and place of refuge, offering protection and a source of food for animals and plants. At the same time, they ensure the genetic diversity of plant species by serving as corridors for pollen flow.



Cooling

The heat load drops measurably the shadow effect of the treetops and by the cooling effect as a result of water evaporation.







Urban Trees

Sponge City ACO WaterCycle

Save and reuse rain water

Based on our drainage expertise, we increasingly see our mission as protecting water as a resource. With the ACO WaterCycle, ACO supplies systems that collect, clean, store and return water to the water cycle. We use intelligent drainage systems and smart digital technologies to divert and temporarily store rainwater. Special separation and filter technology prevents contamination of the water.

We accept the challenge of reusing water and thus ensuring a resource-saving cycle. ACO attaches great importance to longevity, reusability and a low carbon footprint for all products and systems.

Urban Square

ACO Sponge City concept for public pedestrian places

How does it work

- Rain water collecting from roof surfaces and pedestrian areas
- Treatment of rain water within the advanced sedimentation system
- Storage of the cleaned rainwater on site in the storage and infiltration tank
- Fully automatic irrigation of plants and trees with smart sensors





Urban Streets

ACO Sponge City concepts for city streets

How does it work

- Heavily polluted rainwater collecting from roads surfaces
- Advanced treatment of the rainwater through substrate filter stages and sedimentation
- Heavy rain prevention through automatically controlled buffer storage according to the rain forecast
- Fully automatic irrigation of trees and plants with smart sensors









Urban Residential

ACO Sponge City concepts for urban residential streets

How does it work

- Rainwater collecting from different areas
- Natural cleaning via the planted swale zone
- Storage of rainwater on site
- Watersupply for municipalities irrigation vehicles





Urban Trees

ACO Combipoint Sponge City

Collecting gullies for tree roots

The sponge city is a natural building principle and not a building product, but with the right, space-saving system components, water is introduced into the sponge city in a controlled manner. The ACO Combipoint is the solution for every sponge city projects.

The well-known ACO Combipoint street gully becomes the ACO Sponge City modular system.

The combination of existing components with the well-known advantages such as tightness, height adjustability and flexibility with the newly developed Sponge City system components results in a flexible modular system.

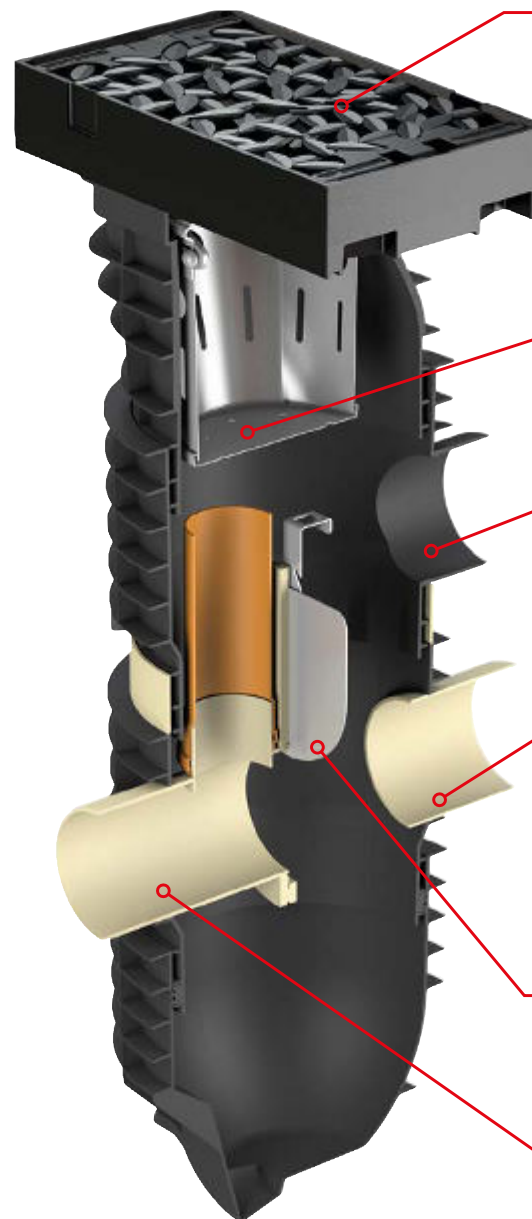
ACO Combipoint Sponge City

Smart use of rain water

Instead of draining the precipitation and heavy rainwater as quickly as possible, it is conducted into the roots of the urban trees.
The aim is to introduce as much rainwater as possible to supply the tree even during longer dry periods without additional watering.

Product advantages

- Water tight joints
- Height adjustability
- Flexibility
- Light weight components
- Load class D40 2015



Sponge city design grating



Basket



Sewage outlet

Additional inlet

Integrated isolating slide for seasonal operation



Tree root outlet



Bottom with opening



Bottom



Cone



Top piece



Top piece with DN160 outlet





*SPONGE CITY
Bad Vöslau, Austria*

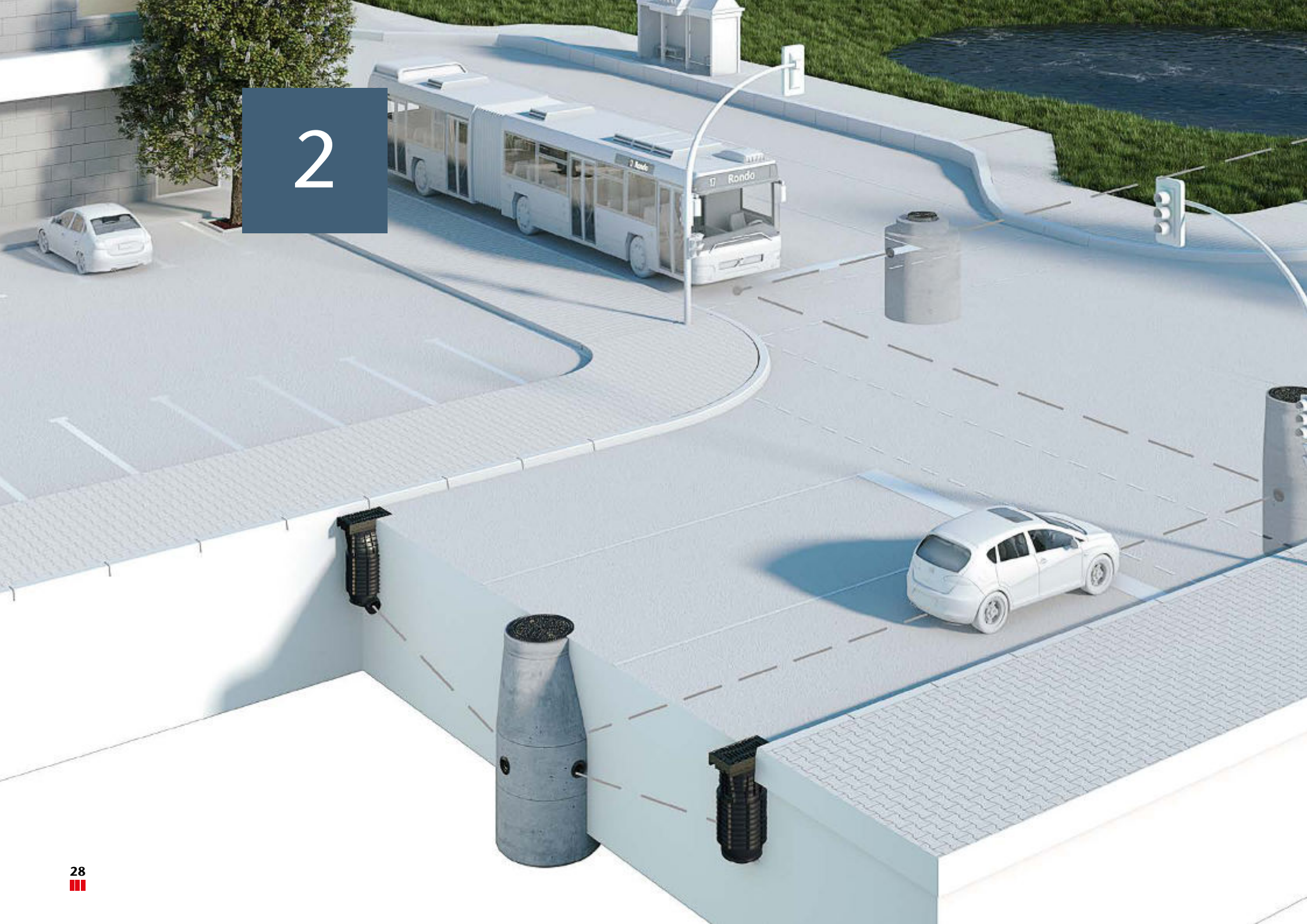


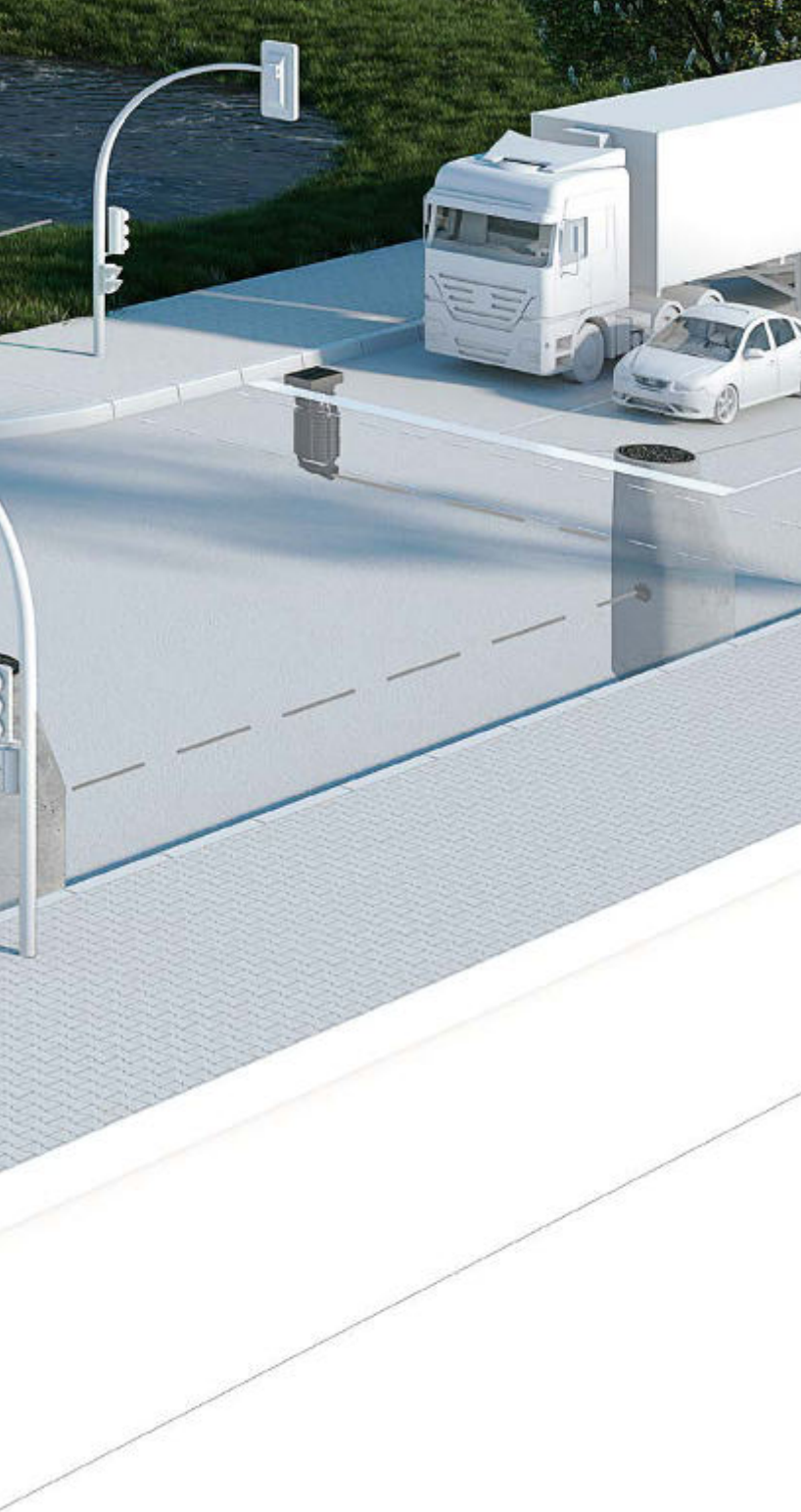
*SPONGE CITY, SEESTADT
Aspern, Austria*



*Sponge City, KROATENGASSE
Linz, Austria*

2





Streets

Safety is the main concern when designing and building streets in modern cities. We are looking for robust solutions, without removable elements, that take all the rainwater from the road surfaces or that ensure access to the building infrastructure. The best possible integration into asphalt layers and ensuring grip are also important for road users, who must focus on safety. ACO comes with products that make the difference for a safe traffic.



CITY STREET, Croatia



Streets

ACO Multitop Bituplan

Self-leveling manhole covers

The innovative ACO Multitop system is designed to meet the modern challenges of urban steets. The smart structure of the elements provides distribution of the dynamic traffic load, which ensures the durability of installation and guarantees safety and comfort without disturbing noises under traffic.

ACO Multitop Bituplan

Product advantages

- A long-lasting and cost-effective solution
- Perfectly leveled with the asphalt surface
- Anti-vandalism bolt lock
- Pewepren seals in the frame
- Cover has a non-slip surface
- Able to display an emblem or logo

Load class D400, in compliance with the requirements of EN 124: 2015



Soundproofing seal made of highly resistant PEWEPREN®



Anti-vandalism bolt lock

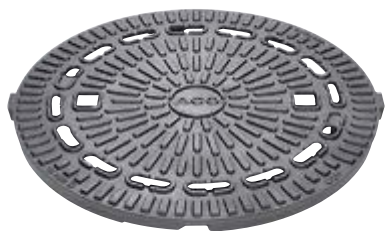


Non-slip surface independent of the direction of travel



Easy and safe access for inspection

Fast installation thanks to its smart construction.



Ductile iron cover (EN GJS)



Cast iron frame (EN GJL)



Adapter ring



Steel case for installation formwork





*CITY STREET
Belgrad, Serbia*



*DUMBRAVA VLASIEI
Balotesti, Romania*



CITY STREET
Cluj-Napoca, Romania



*MARIA LUISA BOULEVARD
Varna, Bulgaria*



Streets

ACO KerbDrain

Kerbs with integrated drainage

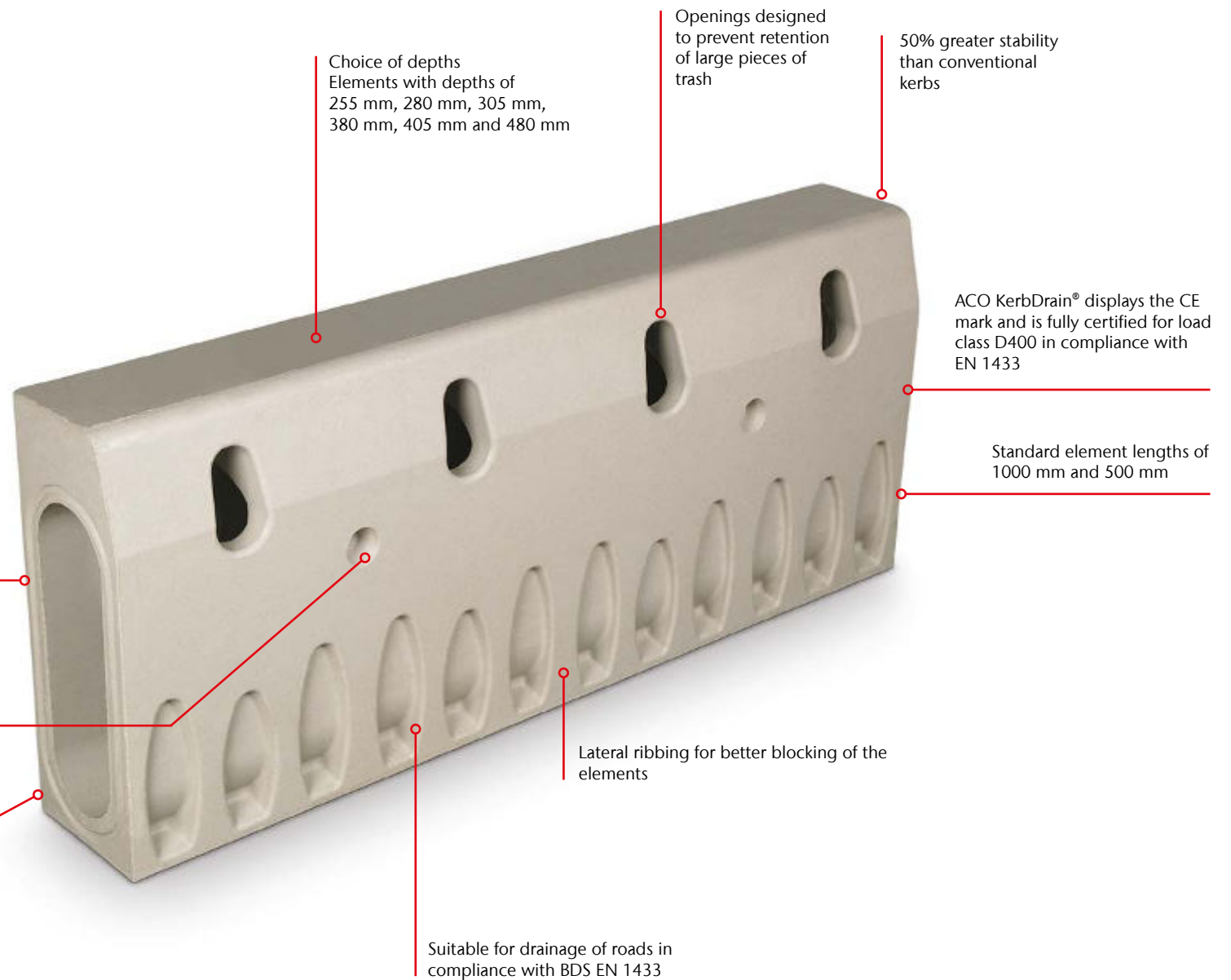
The ACO KerbDrain is a monolithic system that combines a kerb and a drainage channel. The system was developed in response to modern infrastructure requirements for functionality, security and aesthetics.

The ACO KerbDrain supports freedom in the design and layout of roads and parking lots. The system has received the Queen's Award for Innovation in the UK.

ACO KerbDrain

Product advantages

- Elegant solution that combines drain and kerb in a single system
- Possibility of different kerb sizes and profiles
- Ideal solution for surfaces with longitudinal slopes $\leq 2\%$
- Eliminates the need for point drains and leaves the surface free of gratings
- With no removable parts, a monolithic structure that prevents vandalism





Water collection sump



Inspection element



SP - sloped kerb for longitudinal roads drainage



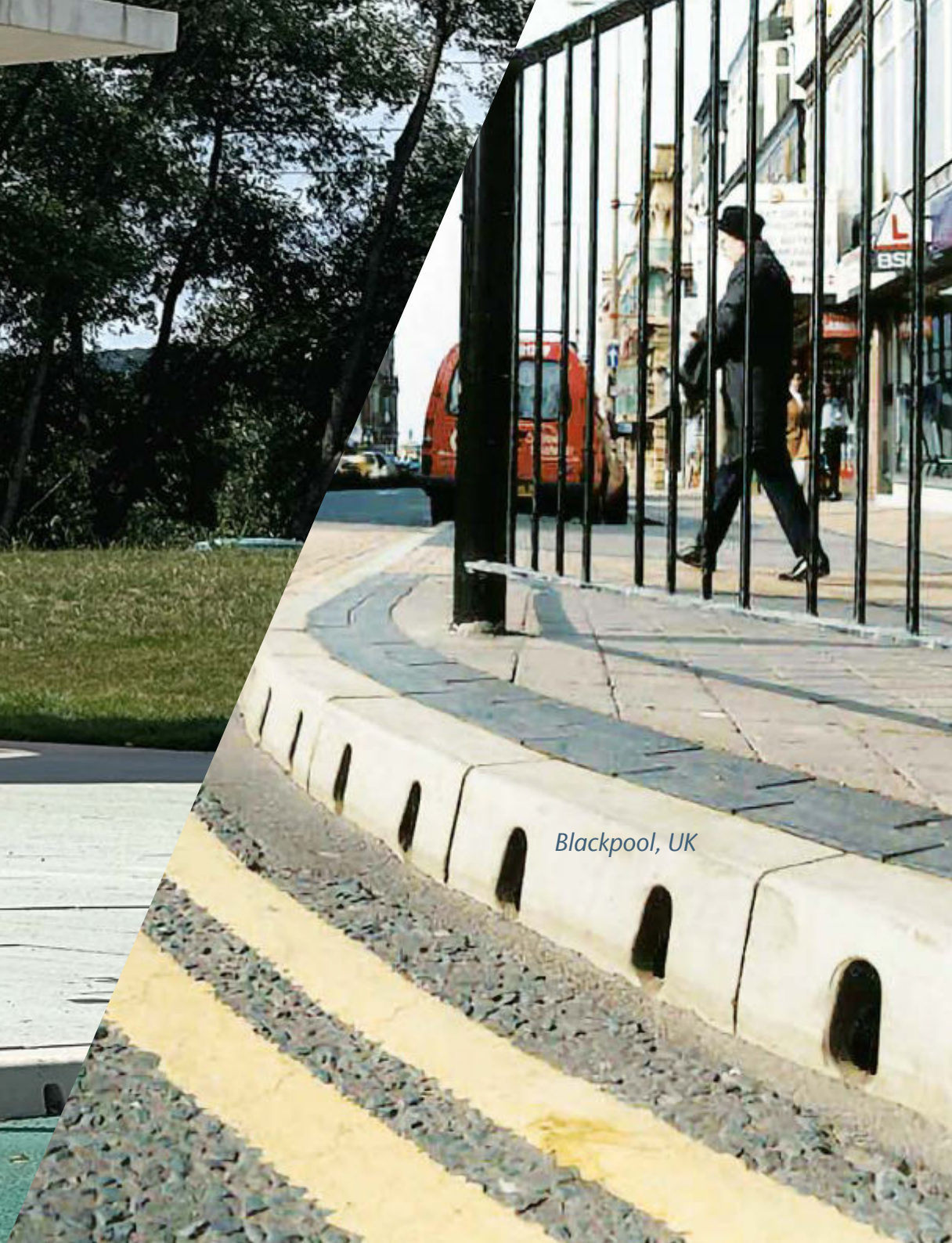


Bushaltestelle, Germany

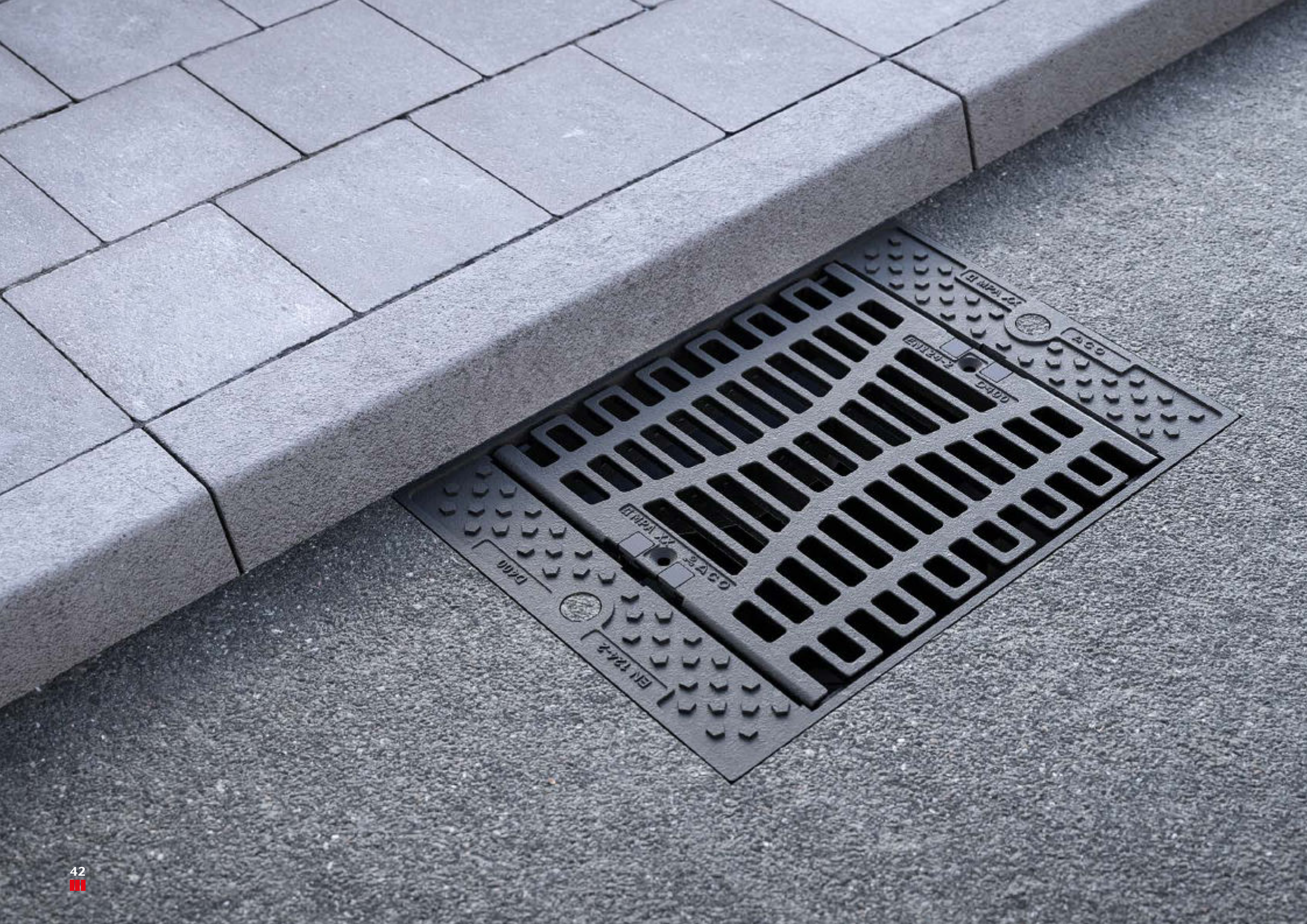




Cluj-Napoca, Romania



Blackpool, UK





Streets

ACO Combipoint Bituplan

Self-leveling street gullies

The ACO Combipoint PP system is the first system that can be rotated, adjusted, telescopically shortened, or installed at an angle while providing a number of advantages in design, installation and operation. ACO Combipoint offers a number of advantages for point drainage. The smart structure distributes the load on the road surface. The grating remains leveled with the asphalt surface. The system is designed for a load class D400, in compliance with EN 124.

ACO Combipoint Bituplan

Product advantages

- Smooth surface - the system distributes the dynamic load and levels with asphalt surface
- Total adaptation of the sump body
- Quick and easy installation
- Hidden anti-vandalism bolt lock
- Load class D400, in compliance with EN 124: 2015
- Hydraulic capacity of 19.5 L / s



Hidden anti-vandalism bolt lock



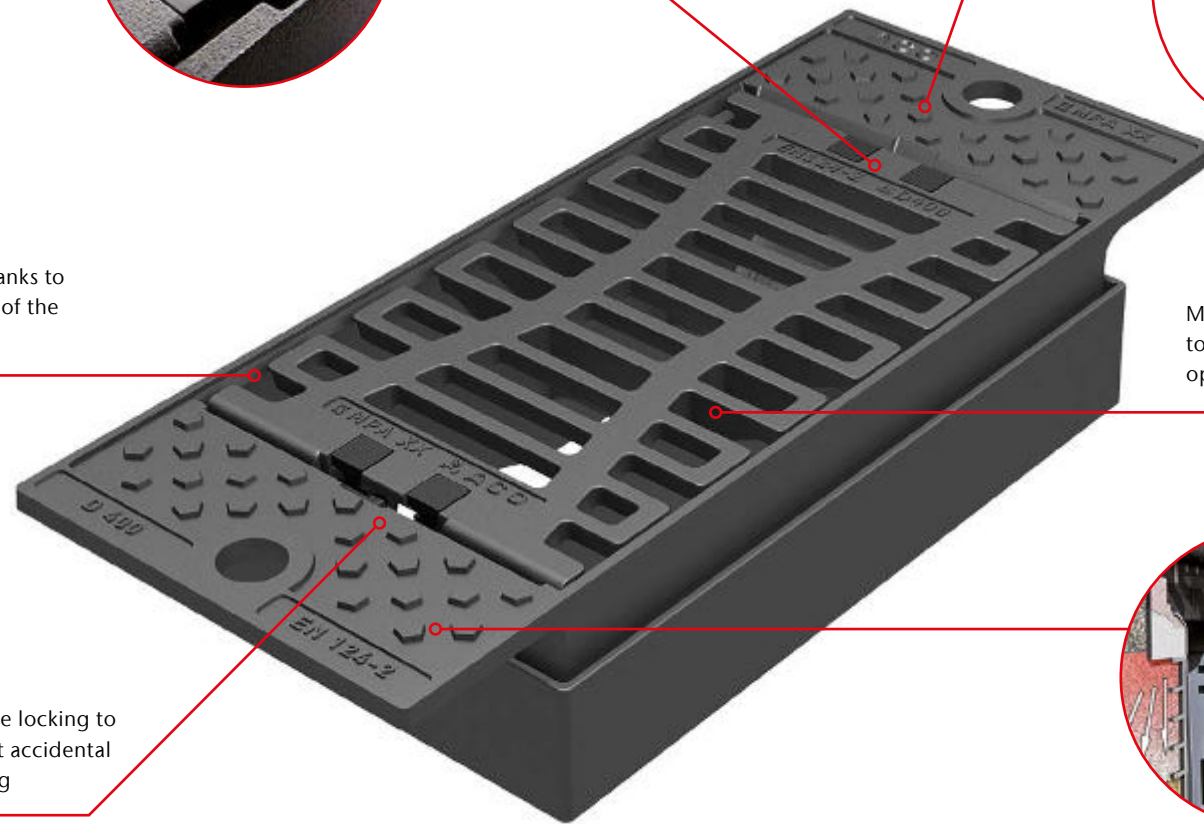
Double hinge for opening



Easy opening thanks to the light weight of the grating - 28.5 kg



Bolt-free locking to prevent accidental opening



Minimal risk of clogging thanks to the optimized width of openings



Load distribution system



Bottom with outlet



Bottom



Cone top piece



Middle/top piece



Top piece with DN160
outlet/inlet

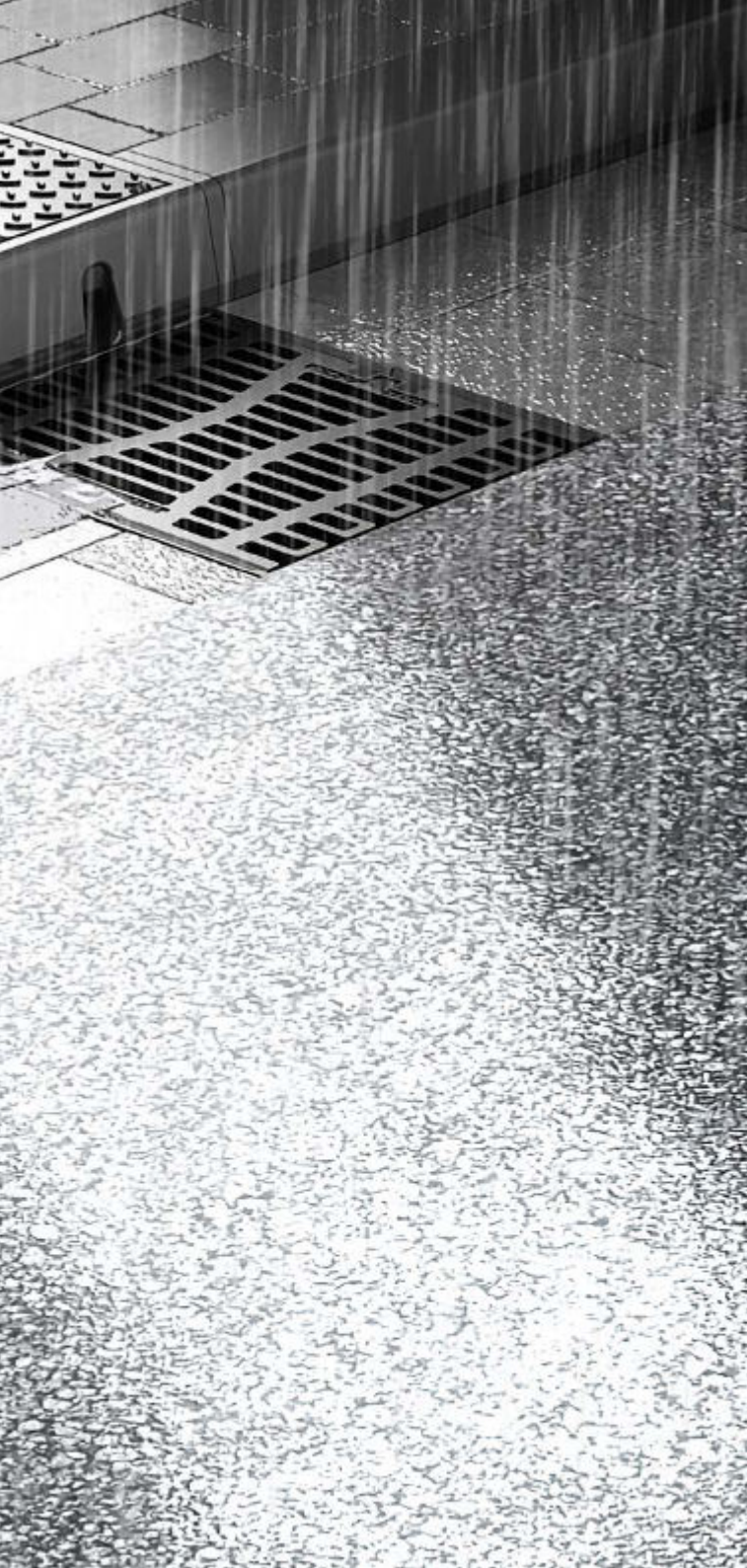




Râșnov, Romania







Streets

ACO Drain®Box

Line drainage meets point drainage

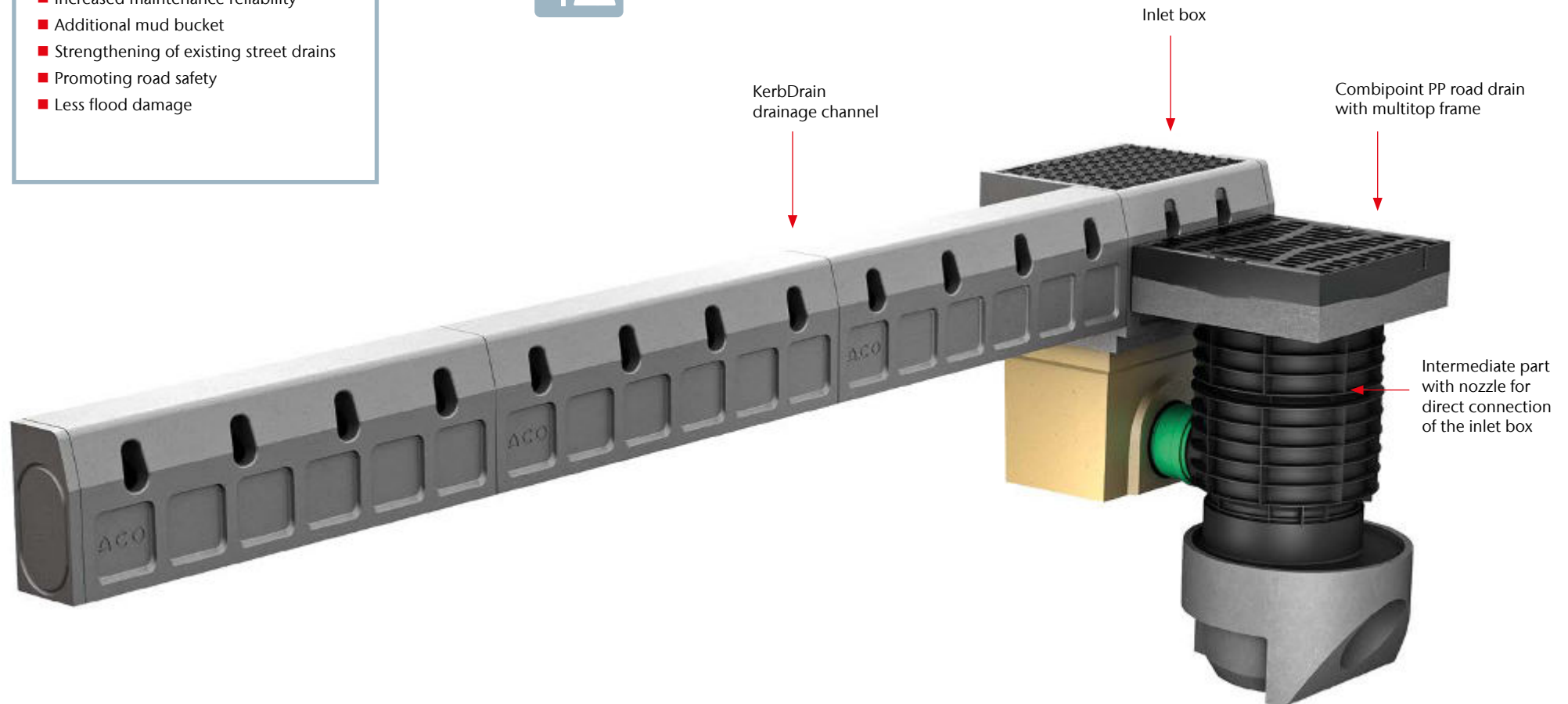
ACO Drain®Box is the new solution for dangerous flooding hotspots. The special thing about the ACO Drain®Box is the combination of line and point drainage. Before the point drain, the side openings of the kerb drain absorb some of the incoming water. With just a few meters of ACO KerbDrain, a significant improvement in hydraulic performance is achieved. The hollow-border gutter is connected to the street drain via the inlet box. Suitable for retrofitting, renovation and new construction, an ideal solution for sloped sheets in hilled towns.

ACO Drain[®]Box City

for the inner city area

Advantages of the system

- Performance increase through a combination of line and point drainage
- Increased maintenance reliability
- Additional mud bucket
- Strengthening of existing street drains
- Promoting road safety
- Less flood damage













Streets

ACO Oleopator G-H

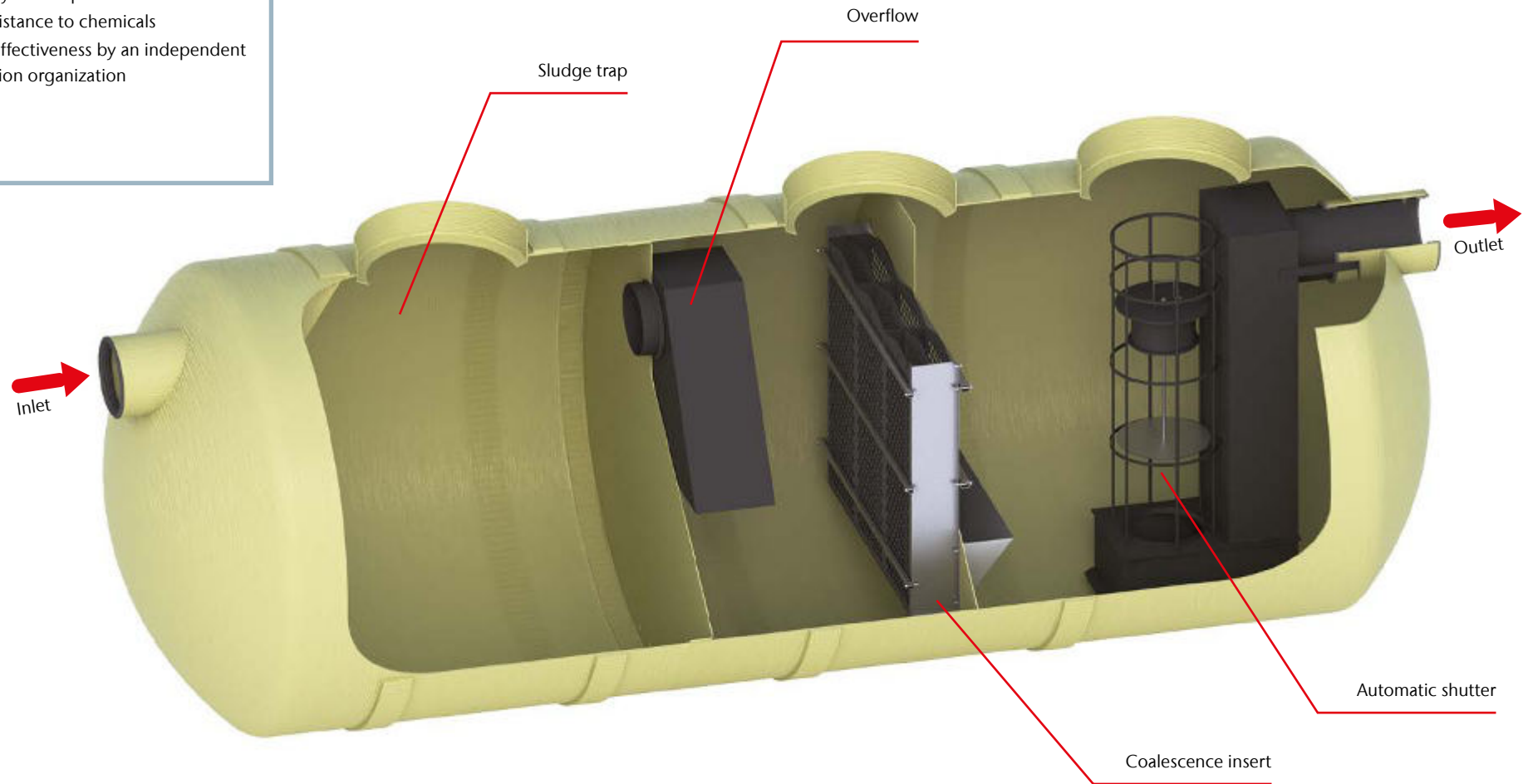
Oil separator from glass reinforced plastic

The main objective of a sustainable drainage systems is the treatment of surface waters as close as possible to the source of pollution. Oil separators effectively separate all petroleum products in the storm water and stop them from being transferred to nature where they will be a danger to the environment. The light oil separators manufactured from glass reinforced plastic are a suitable solution for water purification from streets.

ACO Oleopator G-H

Advantages of the system

- Manufactured from glass reinforced plastic
- Low weight and long lasting
- Possibility for deeper installation
- High resistance to chemicals
- Proven effectiveness by an independent supervision organization





Upper part with frame and cover for load class A15 according to EN 124



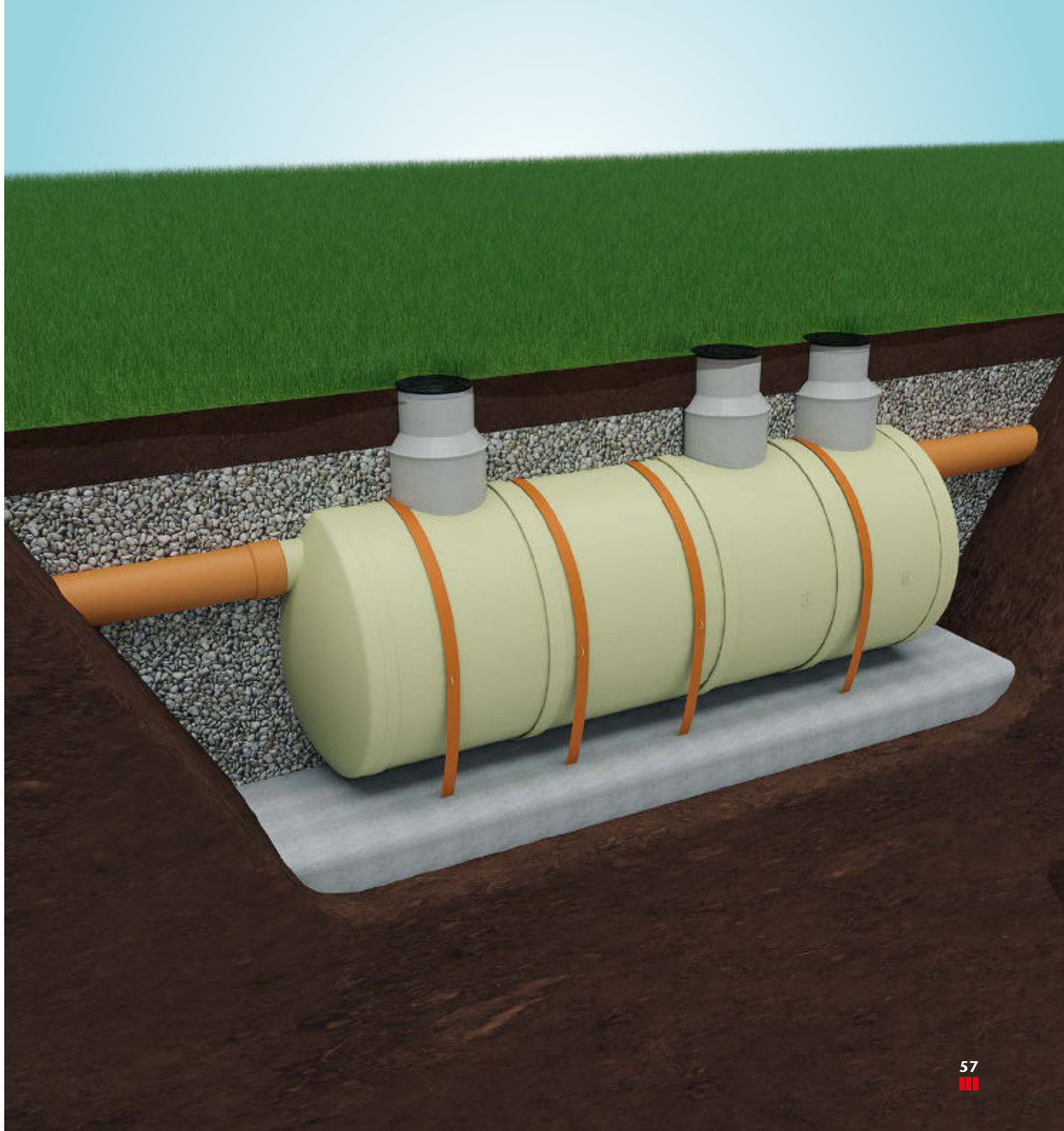
Upper part with frame and cover for load class B125 according to EN 124



Upper part with frame and cover for load class D400 according to EN 124



Automatic signaling device with GPS connection and SMS notification



What is stormwater runoff?

With less vegetation and more impervious surfaces such as parking lots, roads, buildings, and compacted soil, developed areas allow less rain to infiltrate into the ground, resulting in more runoff compared to undeveloped areas. The water then flows across paved surfaces in cities, picking up various pollutants such as suspended solids, nitrogen, phosphorus, bacteria, mineral oils, waste including plastics, pesticides, and heavy metals. All of these pollutants degrade water sources, which are essential to our lives.





Streets

ACO Stormsed & ACO Stormclean

Advanced storm water treatment in urban areas

Urban planning plays a crucial role in protecting urban water environments. Understanding and establishing thresholds between urbanization and water quality is key to driving urban stormwater quality management.

Stormwater is a valuable resource that is readily available from nature, and conserving it is crucial in urban environments.

Stormwater runoff can transport traffic pollutants generated in urban areas to the wider environment. Two key sources of urban pollution are vehicles and the use of metal roofing materials. Over time heavy metals, oils and particles from roofs and vehicles build up on impervious surfaces such as pavements, carparks, major roads, and motorways. Rainfall and snowmelt then remobilise these pollutants and transports them to receiving waters. This reduces the quality of surface water, ground water and soils.

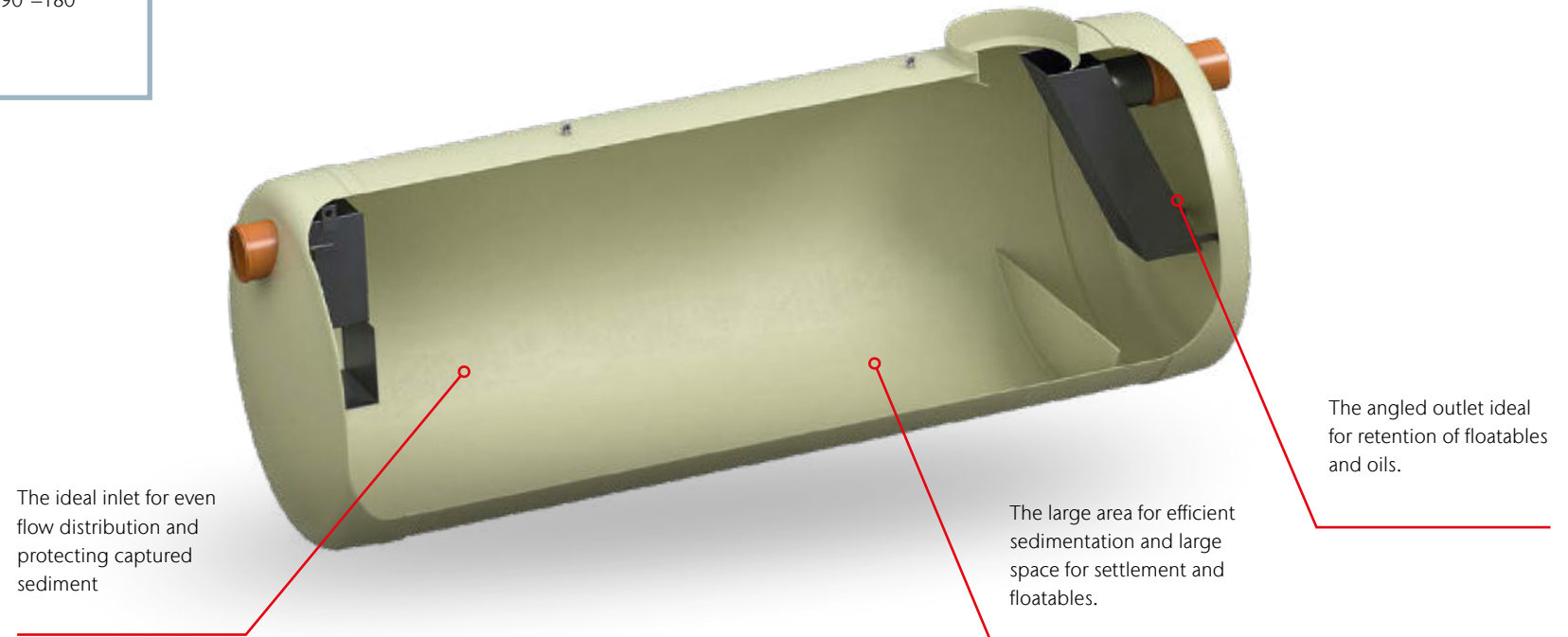
ACO Stormsed and ACO Stormsed Vortex

Product advantages

- Wide range of sizes for matching required flows
- High elimination of sediment (up to 80%) and floatables
- SMART design of inner parts comparing standard sludge traps which influence functionality
- Large retention for sediment and floatables
- Easy service access
- Possibility of various outlet angles 90°–180° (optional)

ACO Stormsed G advanced removal of sediments

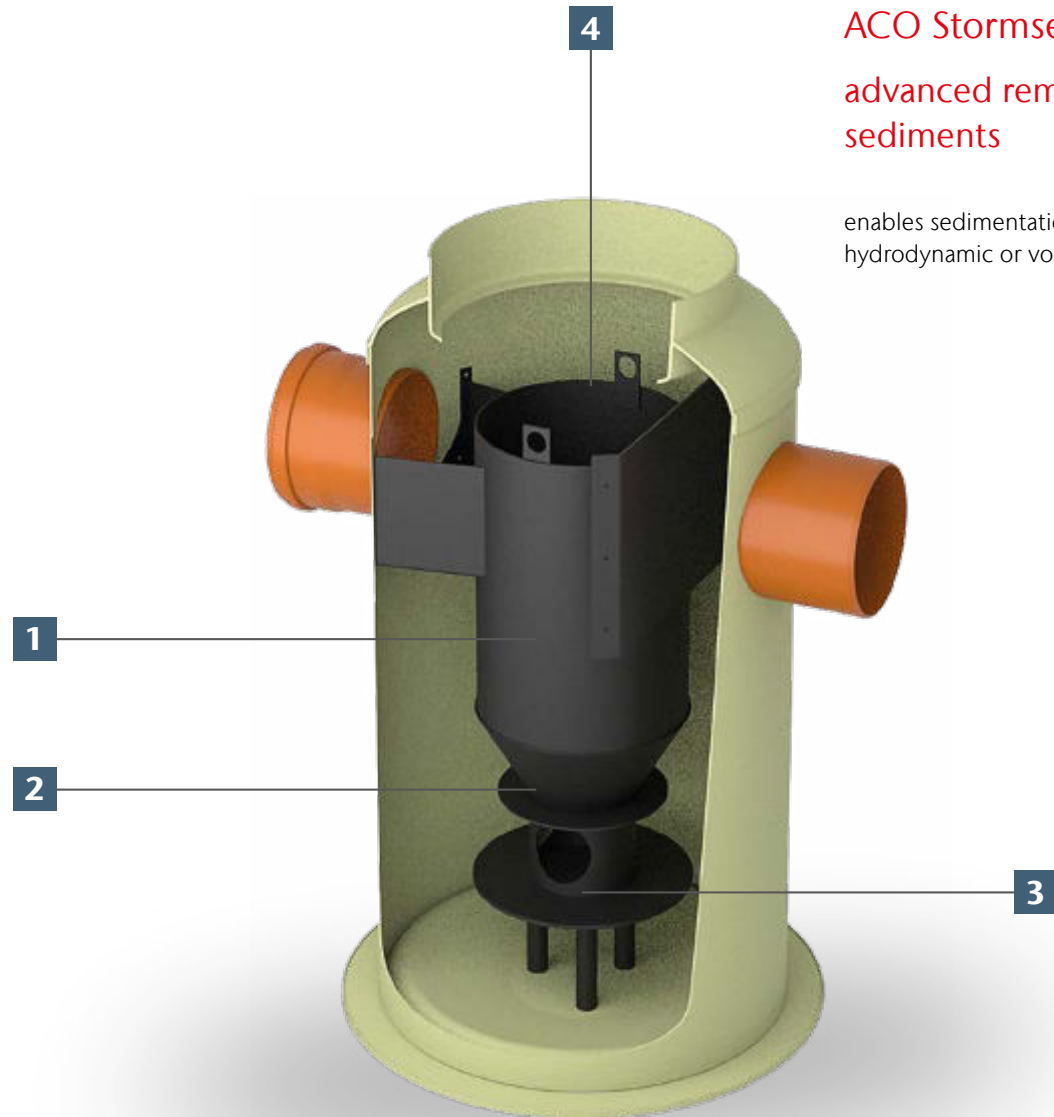
captures and retains pollutants, such as fine sediment and residual oils with minimum remobilization effect



Product advantages

- Wide range of flow rates
- Designed for 80% TSS removal of 75-micron particles at high treatment flow rates
- Compact treatment solution with low footprint
- Patented design
- Easy maintenance
- Inner parts are made of high-density polyethylene (HDPE)
- Possibility of various outlet angles 90°–180° (optional)

- 1 Vortex Treatment Chamber
- 2 Sediment Distribution Unit (SDU)
- 3 Large captured sediment storage chamber
- 4 Baffle



ACO Stormsed Vortex G advanced removal of sediments

enables sedimentation via
hydrodynamic or vortex separation

ACO Storm Clean

Why ACO Storm Clean?

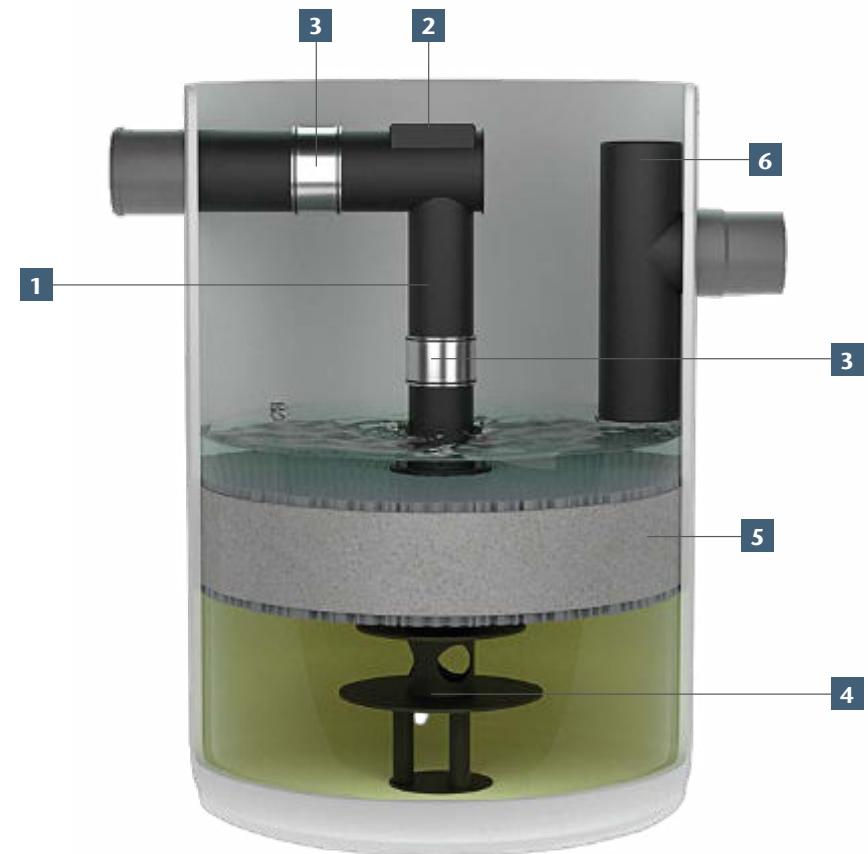
There are areas where the concentration of harmful dissolved pollutants exceed allowed limits, and the installation of a sedimentation device is not enough for effective treatment. These areas are mainly industrial areas and areas with heavy traffic loads. Examples include industrial zones, logistics centers, train or bus stations, parking lots at commercial buildings, or busy road and highway infrastructures.

When stormwater carries high concentrations of harmful dissolved pollutants, it is essential to remove those pollutant with an advanced treatment step before discharging, as untreated stormwater poses a threat to local water sources.

ACO presents the **ACO Stormclean stormwater filter** as a compact solution to advanced stormwater treatment needs. Due to its small footprint, it is an attractive alternative to large above ground soil filters when space is at a premium. ACO Stormclean combines four crucial processes – sedimentation, filtration, adsorption and precipitation – to ensure bound and dissolved pollutant are removed from stormwater.

Advanced Treatment

- 1 Inlet structure: full flow treatment
- 2 Inlet structure: with integrated bypass
- 3 Flexible pipe couplings
- 4 Sediment Distribution Unit (SDU)
- 5 Loose filter bed
- 6 Submerged outlet pipe



ACO Filter Media Storm

At the core of ACO Stormclean is ACO Filter Media Storm, a stormwater filter material developed with the EU WFD (Water Framework Directive) at its heart to meet national certification schemes.

A carefully engineered mixture of granule sizes allows the filter to remove small particle sizes without clogging. In addition, the choice of special granules capable of adsorbing key pollutants such as Zinc (Zn), Lead (Pb), Copper (Cu) and oil ensure dissolved pollutants are removed and retained by the filter. ACO Filter Material is suitable for use as a decentralised rainwater filter protecting surface waters and treatment before ground water infiltration, protecting precious ground water sources.

ACO Filter Media Storm

is a granular reactive filtration material for use in stormwater quality improvement. Key applications are as an enhancement to sedimentation solutions to remove dissolved pollutants, as a standalone improvement device prior to groundwater infiltration (in conjunction with geocellular storage such as ACO Stormbrixx) or as an integral component of an infiltration shaft/trench.

Benefits

- Light weight (0,7 kg/l) for ease of transport
- Filtration of suspended solids
- Sorption of dissolved pollutants
- Efficient cleaning for high surface areas
- Resistant to de-icing salts
- Sustainable: partially made from waste materials
- Low cost
- To prolong filter lifetime, we recommend being located after ACO sedimentation solutions

ACO Stormclean G



ACO Stormclean C







Streets

ACO Stormbrixx

Storm water attenuation and infiltration system

The ACO Stormbrixx attenuation and infiltration system offers an environmentally friendly and efficient solution when there is no sewage system or is needed to help the sewage system. During infiltration, rainwater is collected in ACO Stormbrixx and then gradually released into the adjacent soil. When environmental protection conditions are not allowing infiltration, ACO Stormbrixx is used as a fully retention tank, with a simple wrapping of geo-membrane to water-proof the system. The adjacent soil must be permeable and there must be no water-retaining layer in the subsoil. No harmful substances may enter the soil or groundwater during infiltration.

ACO Stormbrixx

Product advantages

- Structural stability
- Access for inspection up to the full volume of the structure
- Lightweight prefabricated elements for quick and easy installation
- High coefficient of storage
- Sustainable solution for use in parking areas and other areas where water storage or infiltration is required (alternative solution to an evaporation tank)



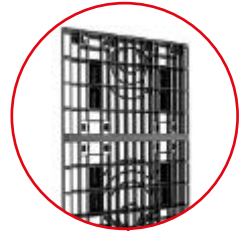
Main element



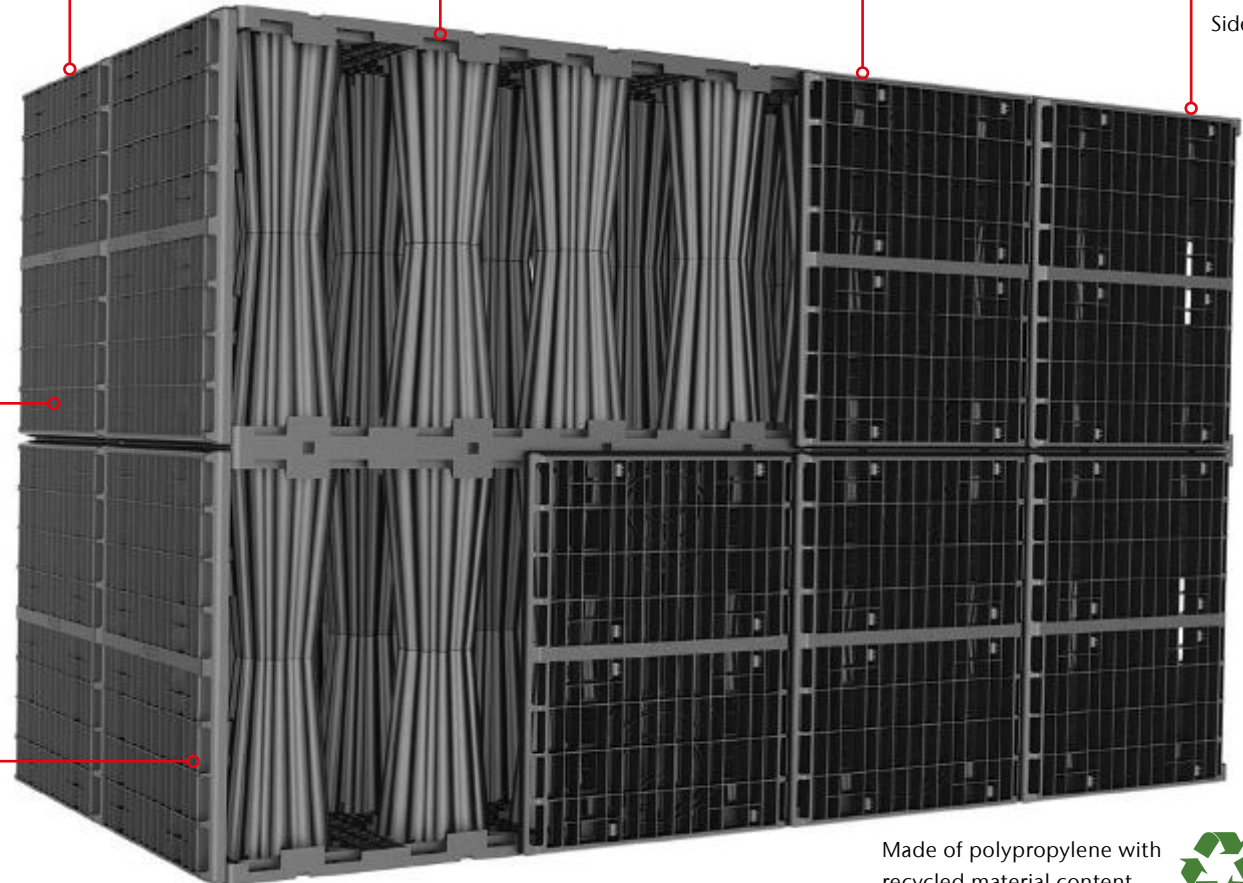
Option for installation on 1/2 layer



Top surface cover



Side element



Storage coefficient of 95%. Optimal filling of the system.



Open structure allows free access for video inspection and cleaning

Made of polypropylene with recycled material content.





Visiting cover



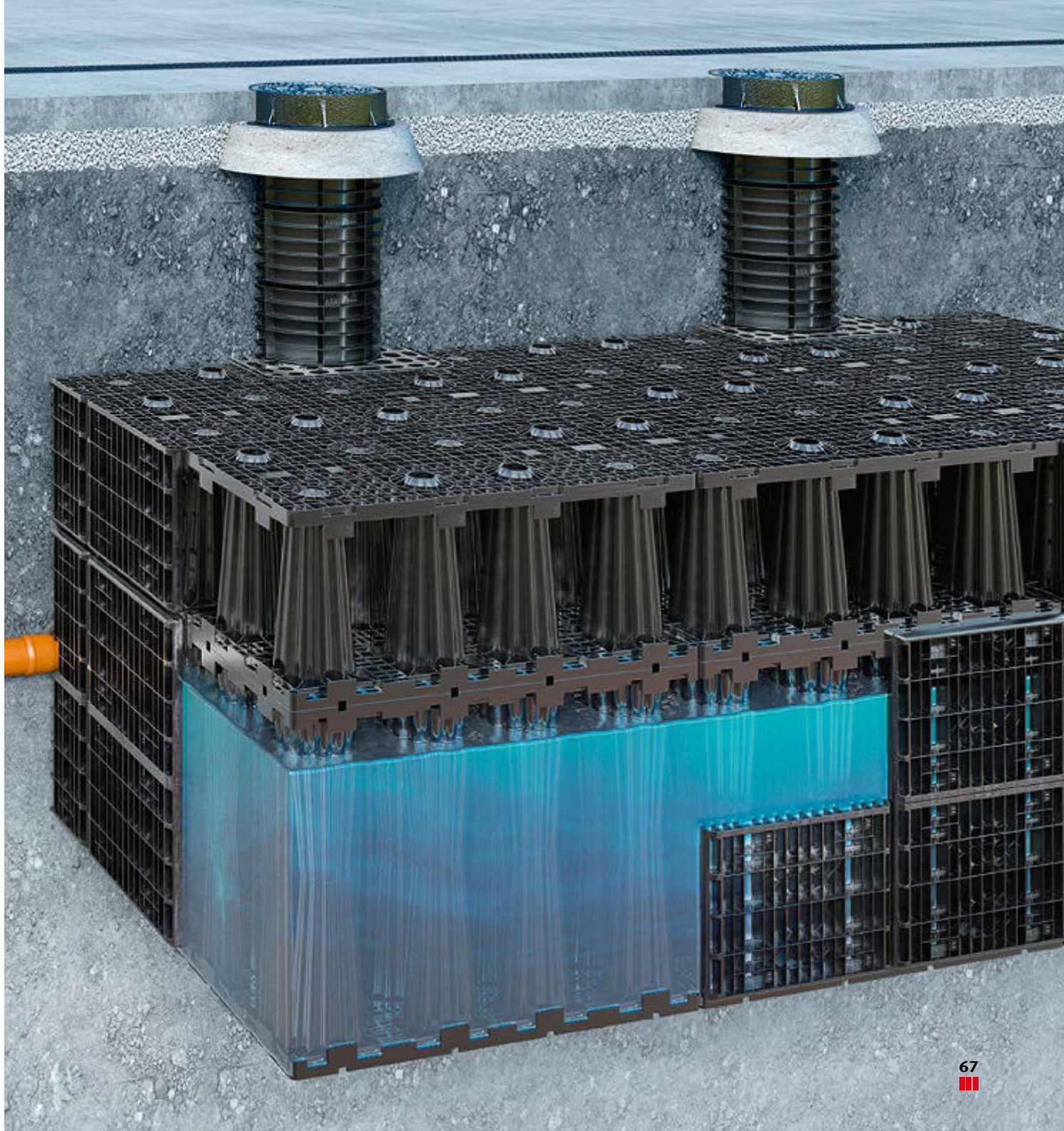
Visiting element



Access plate



Coupling elements for optimal stability of ACO Stormbrixx layers



3





Car Parkings

Parkings are essential for a city. They are a decisive factor for it's overall functionality. Whether parking is outdoors and exposed to the elements, located underground or on a slab where construction heights and the presence of other building systems must be taken into account - our wide range of systems and professional services guarantees an optimal solution for parking area drainage.





Car parkings

ACO DRAIN® Deckline P

Polymer line drainage for parking decks

Surface water primarily gets into enclosed or multistory parking garages in the form of water dripping or melting from vehicles. This water is contaminated with fuel, oil or road salt and must be completely removed from the drainage system. ACO DRAIN® Deckline drainage channels are 100% impermeable, made entirely of polymer concrete and feature a technically smart design. The low profile of the elements and the minimum construction height make them a preferred solution for installation in floor slabs.

ACO DRAIN® Decline P

Product advantages

- Drainage channels in three colors (natural, grey, anthracite)
- Waterproof polymer concrete
- Quick and easy installation.
- Resistant to light car traffic up to class C250 in compliance with EN 1433
- Recommended solution for asphalt surfaces. Others are also possible
- Nominal widths - 100, 150, 200 mm
- Installation heights - 60, 80, 100 mm

Color selection

Color - nature



Color - anthracite



Color - grey



ACO Drainlock® bolt-free locking
- safe and easy installation and
removal of gratings



Minimum mounting height only
60 mm

Front and back
endplates



1 m ACO DRAIN®
Decline P channel

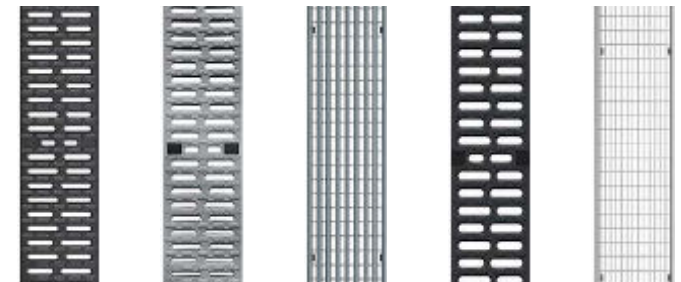


Vertical outlet
channel DN 100



Waterproof stainless steel
flange for secured connection
to waterproofing membrane

Choice of gratings



Surfaces



Functional concrete flooring systems support individual technical solutions and attractive colorful design in multistory and underground parking garages.



The road surfaces in garages are traditionally made of asphalt. It is usually very resistant to abrasion, which means that it is much used in heavily trafficked areas such as alleys, exits or ramps.







Car parkings

ACO XtraDrain

Stable MDPE line drainage channels

The ACO XtraDrain system offers a practical solution for drainage of landscaped and traffic areas where a light composite material is employed. Gratings of different materials, designs and load classes offer a wide range of choices to meet the specific requirements of a project. All gratings are equipped with bolt-free ACO Drainlock locking, which facilitates installation and prevents unwanted opening.

ACO XtraDrain

Product advantages

- Stable MDPE body
- Nominal width 100/150/200 mm
- Prefabricated side knock out or corner, T-shaped and cross connections
- Lightweight
- Special ribs design for quick and easy installation
- Load class to D400 in compliance with EN 1433
- Choice of protective edges made of composite material or galvanized steel



ACO Drainlock® bolt-free locking - safe and easy installation and removal of gratings



Resistance to outdoor conditions (weathering, ultraviolet rays) With no change in mechanical properties.

ACO XtraDrain X 100 - low profile



ACO XtraDrain X 100



ACO XtraDrain X 150



ACO XtraDrain X 200



Accessories



Combination endcap for front and back of a channel



Endcap for horizontal discharge

■ DN 110, 160, 200



Vertical discharge adapter

■ DN 110, 160, 200



Foul air trap with rubber seal

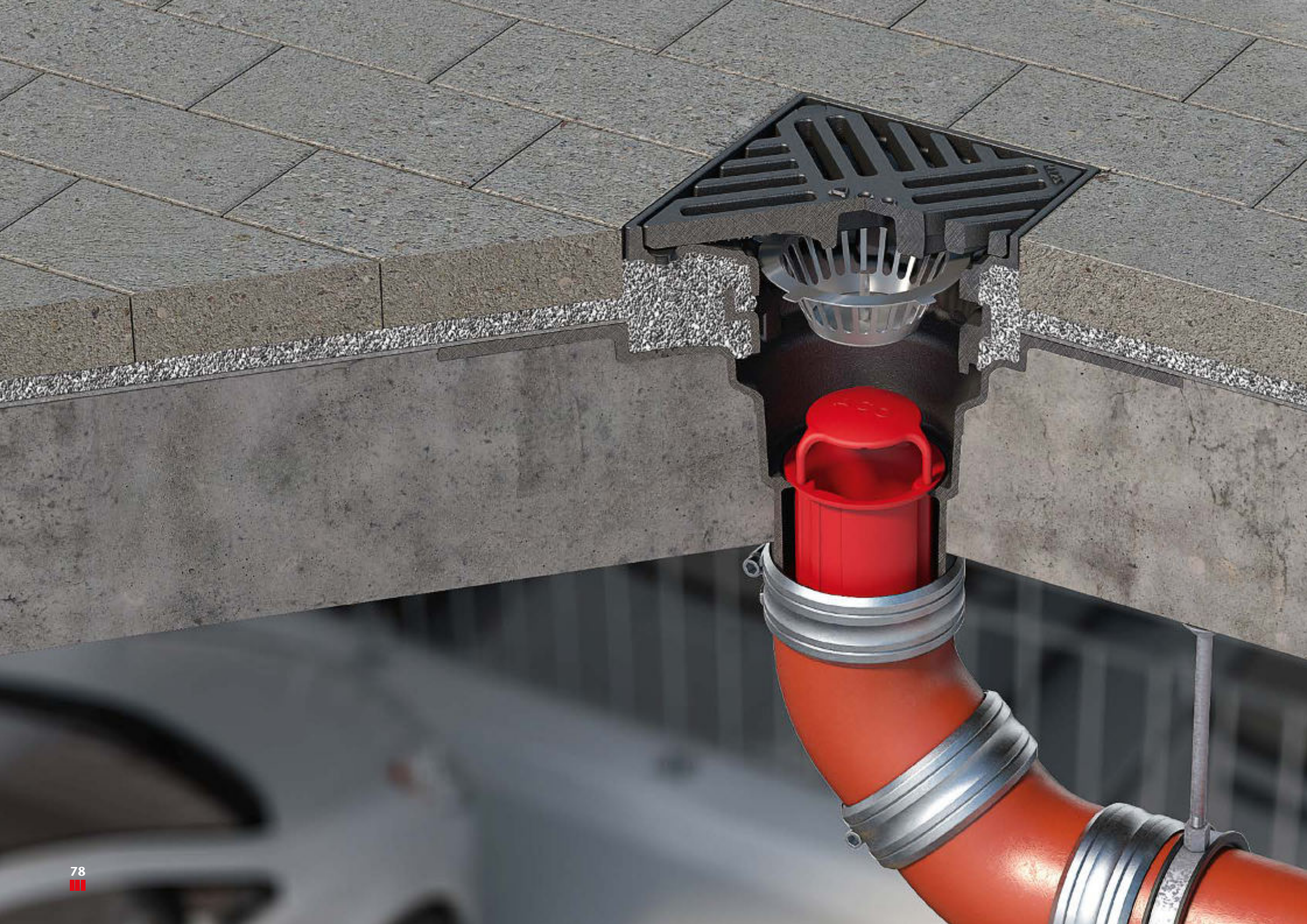
■ DN 110, 160, 200



Inspection shaft with adapter

■ DN 110, 160, 200







Car parkings

ACO Parkdeck gully

Point drainage for parking decks

ACO Parkdeck gullies offer flexibility and durability for all indoor parkings. The trend towards larger and heavier vehicles poses new challenges for drainage components. Cast iron has exceptional compressive strength and can easily withstand extreme loads.

ACO Parkdeck gully

Product advantages

- Durable cast iron body, construction class A1 - non-flammable
- High corrosion resistance for long service life
- Load class: M125
- Compact shape, bare diameter only 160mm
- Secure fire protection class R30 - R120
- Optional flange for attachment to all types of flooring



Resistance to outdoor conditions
(weathering, ultraviolet rays)
With no change in mechanical
properties.

Round shape DN 70



Square shape DN 70



Round shape DN 100



Square shape DN 100



Smart height adjustment

Compensation and height adjustment is especially important for accommodating different surfaces. The ACO Parkdeck gully adapts smartly to any surface height. With a convenient rotating mechanism, the frame can be adjusted to the desired height in 5 mm steps. Two adjustment rings offer an additional solution for heights over 20 mm.



Accessories



Heating element

- Power supply: 220-240V AC
- Protection: IP 67
- Height: 95 mm



Element for fire protection

- Appropriate for DN 70, DN 100



Adapter ring

- Adjustable height 25-40 mm
- Load class M125



Adapter ring

- Adjustable height 45-60 mm
- Load class M125



Silt basket

- Material - stainless steel







Car parkings

ACO Oleolift P-A

Freestanding coalescing oil separator

Oleolift P-A freestanding coalescing separators are designed to remove petroleum substances (mineral oils, petrol, light metals) contained in rainwater. The built-in settling tank additionally removes suspended solids. Thanks to a system of pumps and accessories, the separator can be installed in places below the public sewer gravity discharge point.

ACO Oleolift P-A

Product advantages

- Freestanding coalescing separator for oil products, with built-in settling tank and dual pump
- Easy access and installation in narrow spacs
- High material stability
- Easy installation thanks to light weight
- High operational reliability and long life
- Structural stability guaranteed for 50 years
- All nominal sizes are tested by an independent testing institute (LGA) - test report

Choice of cover



Option 1

Basic plastic cover with handle

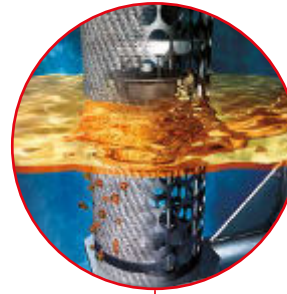


Option 2

Durable plastic cover with handle, seal and metal clamping ring

Sedimentation tank

Inlet



Coalescing filter

Easy to clean - durable metalmesh material



Dual pump

high operational reliability, equipped with control panel



ACO Multicontrol Duo

control panel for dual pump

Accessories



Monitoring device and alarm - Securat idOil 20

- allows combined or separate monitoring of the level of oil, sludge and liquids over an electrical connection
- 230 V/50 - 60 Hz
- IP 67
- Cable 5 m



Sampling device

- Consisting of a hand pump, suction connection, connecting hose and bolt connection



Connection set to suction pipe DN65

- Consisting of PE-pipe, Storz-B connector, clamping elements and bolts



Valve



Inspection port



4

UNIRII SQUARE
Cluj-Napoca, Romania



Pedestrian, Landscaping, Parks

Historic centers, parks, squares, promenade or pedestrian access areas need stormwater management solutions that ensure functionality without compromising on aesthetics. Visual comfort is as important as functional comfort, and ACO understood this very well.



RHEIN BOULEVARD
Koln, Germany



Pedestrian, Landscaping, Parks

ACO DRAIN® Multiline NX Seal in

Watertight line drainage with gratings

Product quality is high dependent on the material.

As a market leader, ACO is committed to innovation. Due to its high packing density, NEXITE® is extremely resistant to intense loading from traffic and attrition from environmental influences such as polluted surface water. NEXITE® has been environmentally certified by KIWA, a globally recognised specialist in the certification of building materials and products.

With NEXITE®, we have expanded ACO's multi-material expertise in a forward-looking way continuing to incorporate modern material variants to the ACO DRAIN® family.

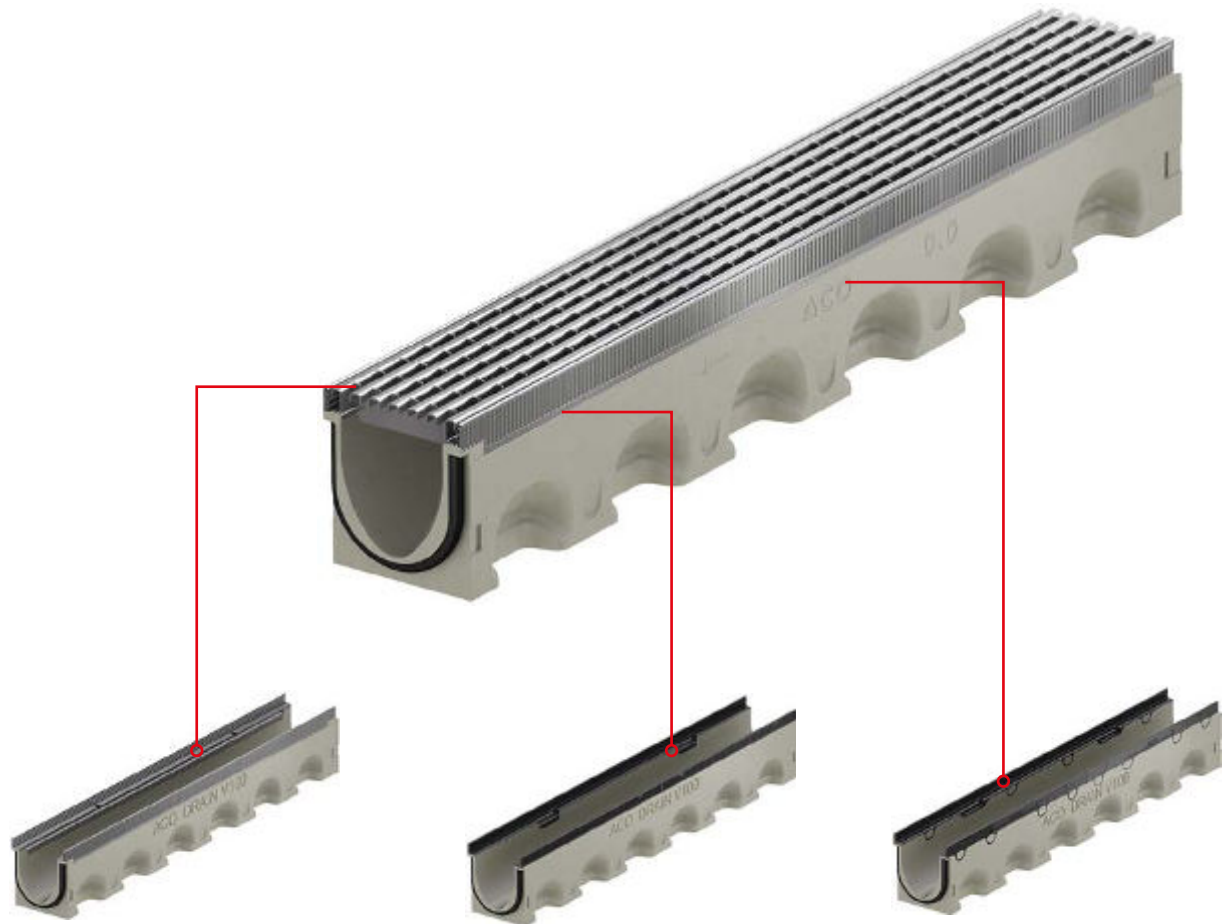
Together with the Seal in Technology, a standard integrated seal, load classes A -E and 1-10 graded slopes. It combines the best of 50 years of innovation, environment protection, watertightness, easy installation and excellent functionality.

NEXITE®. concrete. a new generation

ACO DRAIN® Multiline (NX)

Product advantages

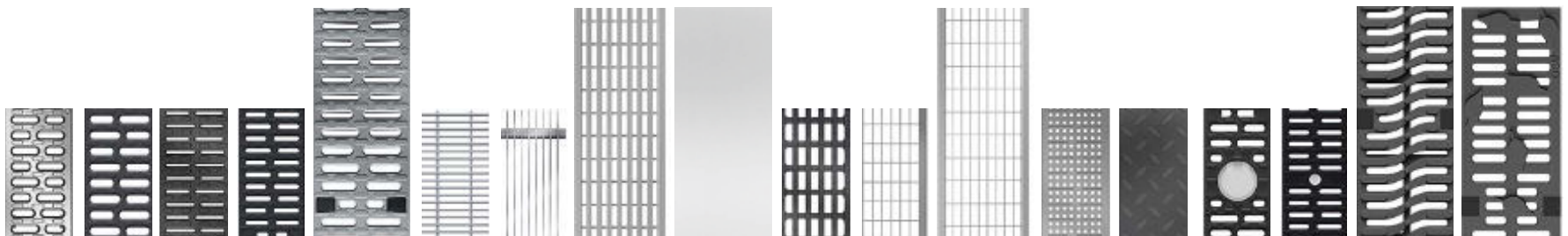
- Channel bodies made of newly developed ACO material NEXITE®
 - Optimised packing density with finest fillers
 - High material strength and load-bearing capacity
 - Recyclable and environmentally certified (according to KIWA certificate BRL 5070)
- Watertight channel run based on Seal in Technology (according to IKT certificate D01398)
 - Integrated EPDM seal
 - Easy to install
 - Protection of groundwater and construction
 - Controlled rainwater management
- Improved self-cleaning due to V-cross section and continuously smooth channel invert
- Compatible with all Drainlock gratings



Edge: galvanized steel

Edge: composite

Edge: cast iron



NEXITE

Material choice
to suit your project!



IKT – Institute for Underground
Infrastructure in Germany



KIWA – Third Party Control
in Germany

Sealⁱⁿ
TECHNOLOGY



100 % recyclable



PITT STREET
Sydney, Australia



Pedestrian, Landscaping, Parks

ACO FreeStyle

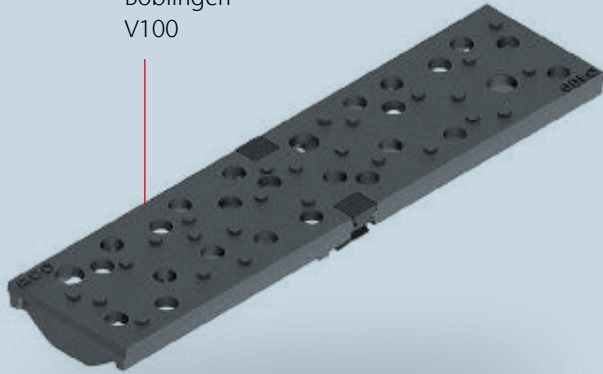
FreeStyle Gratings

ACO provides architects and designers with hundreds of custom Drainlock design gratings. Four different materials, cast iron, stainless steel, polypropylene and galvanized steel, cover all nominal widths and all load classes of the ACO Drain Multiline and XtraDrain channels. Particular attention is paid to the stainless steel and cast iron variants.

New models are regularly launched by ACO, gaining prestigious awards for outstanding design and for the attention to details. The ACO Freestyle gratings range made of cast iron allow designers to express their creativity in the grating pattern, actually any theme inspired by the specifics of the project can be reproduced in the casting of the ACO Freestyle grating made of cast iron, ensuring the exclusivity of the design for that project.

ACO Freestyle Gratings - Unlimited possibilities

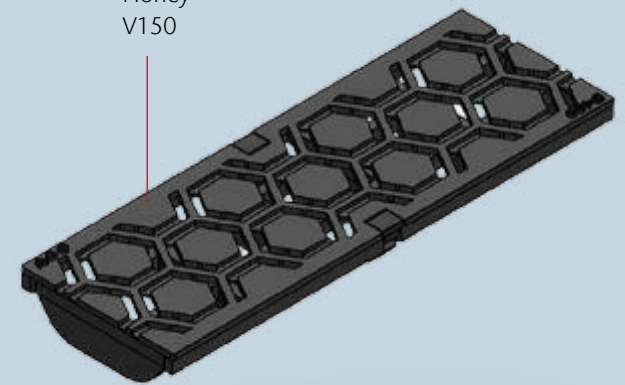
Böblingen
V100



Running Dog
V100/V150/V200



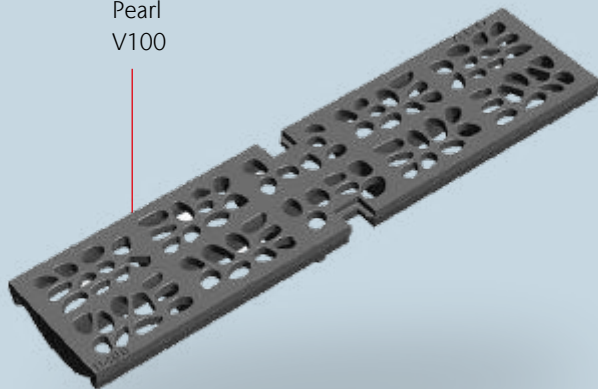
Honey
V150



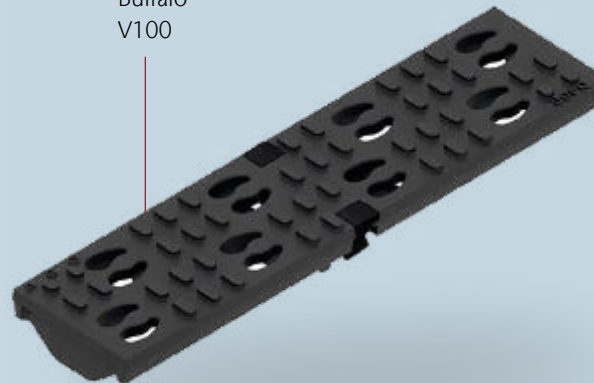
Running Dog
Corner solution



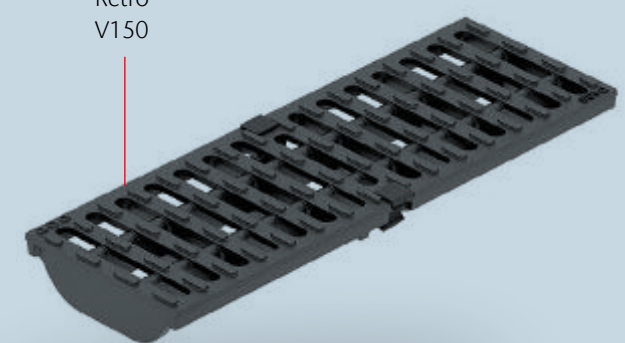
Pearl
V100



Buffalo
V100



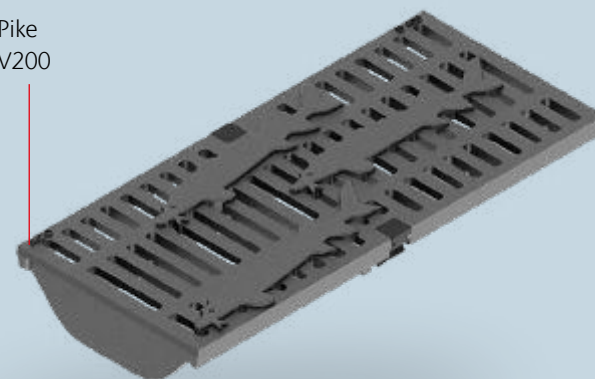
Retro
V150



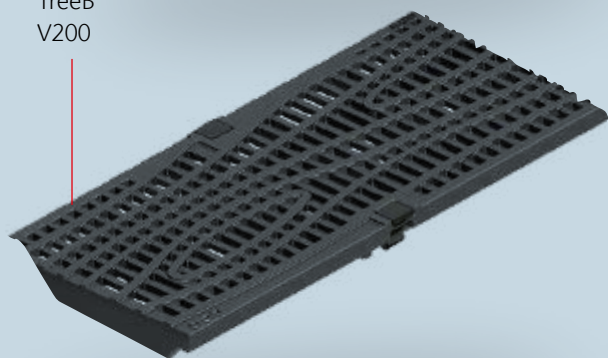
Monoblock
V100



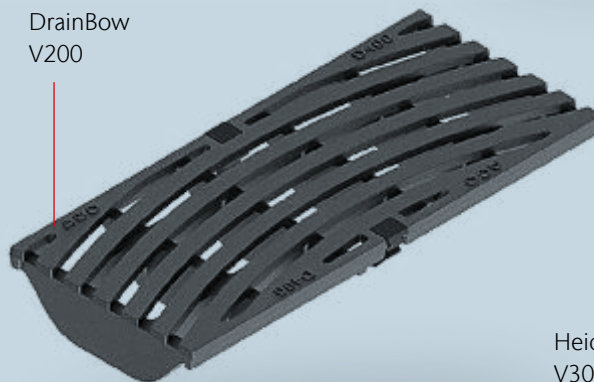
Pike
V200



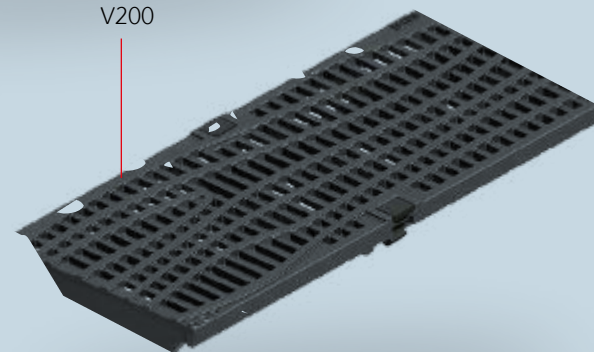
TreeB
V200



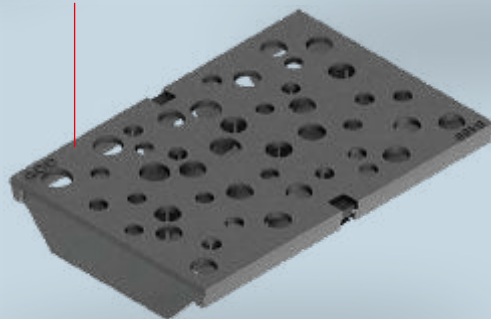
DrainBow
V200



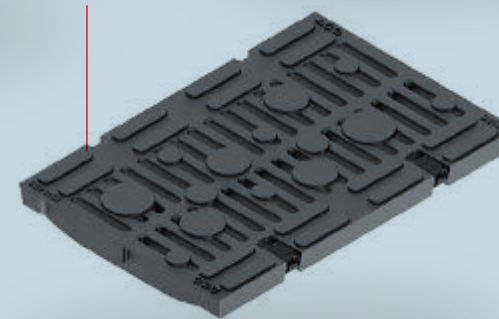
TreeA
V200



Drops
V300

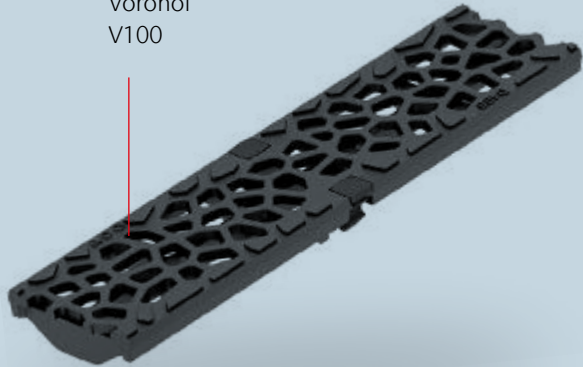


Heide
V300

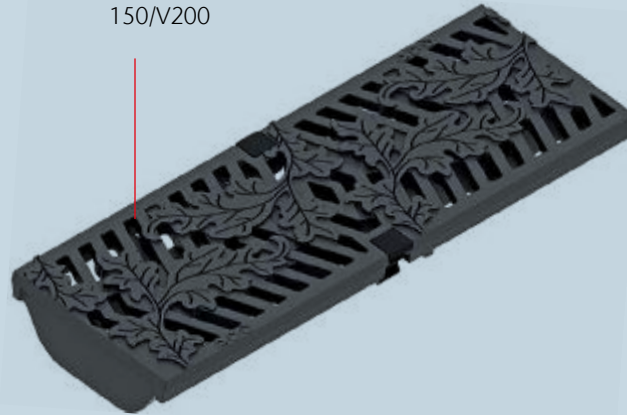


ACO Freestyle Gratings - Unlimited possibilities

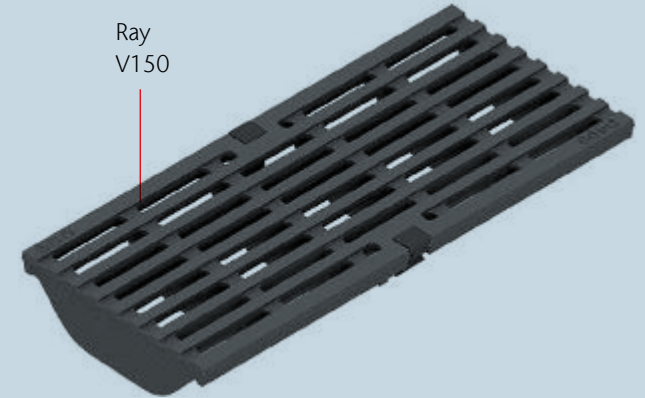
Voronoi
V100



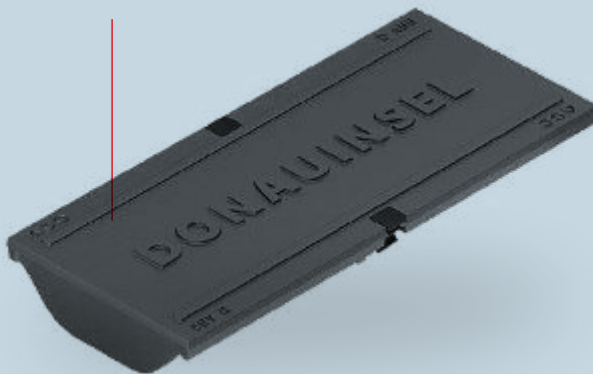
Achantus
150/V200



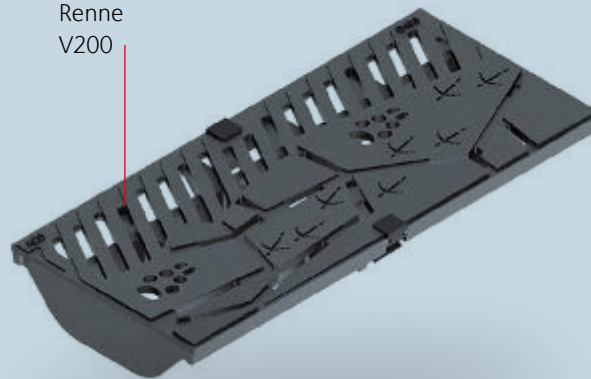
Ray
V150



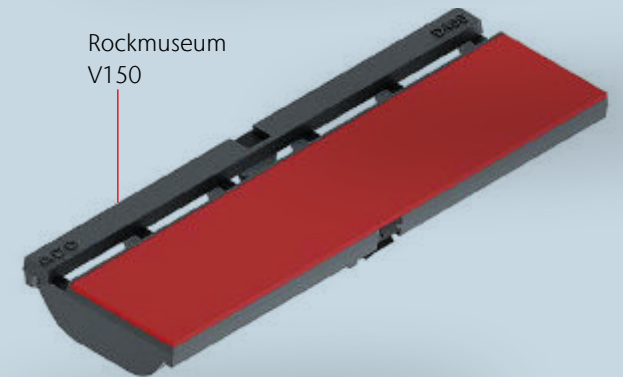
Letterplate
V200



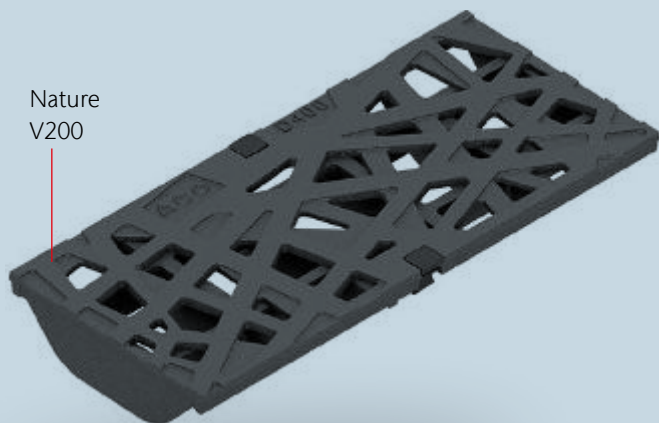
Renne
V200



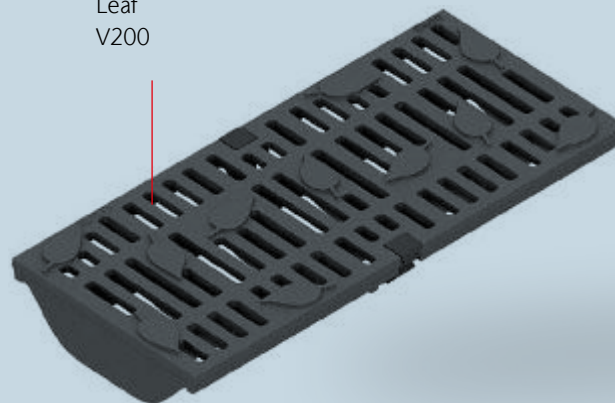
Rockmuseum
V150



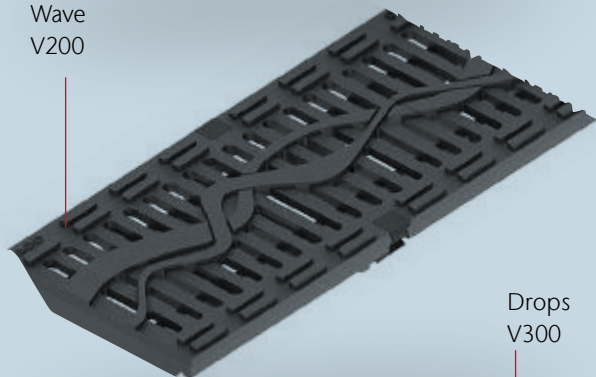
Nature
V200



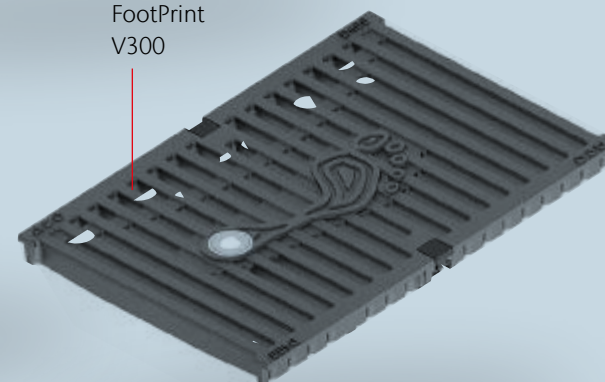
Leaf
V200



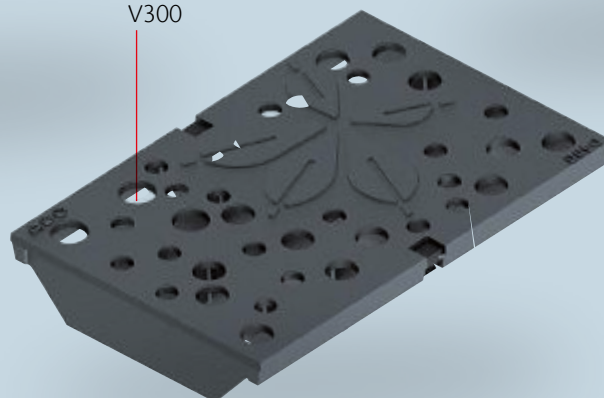
Wave
V200



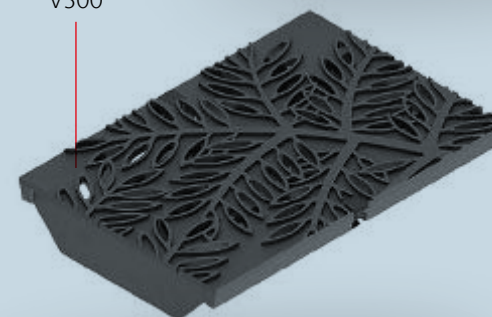
FootPrint
V300

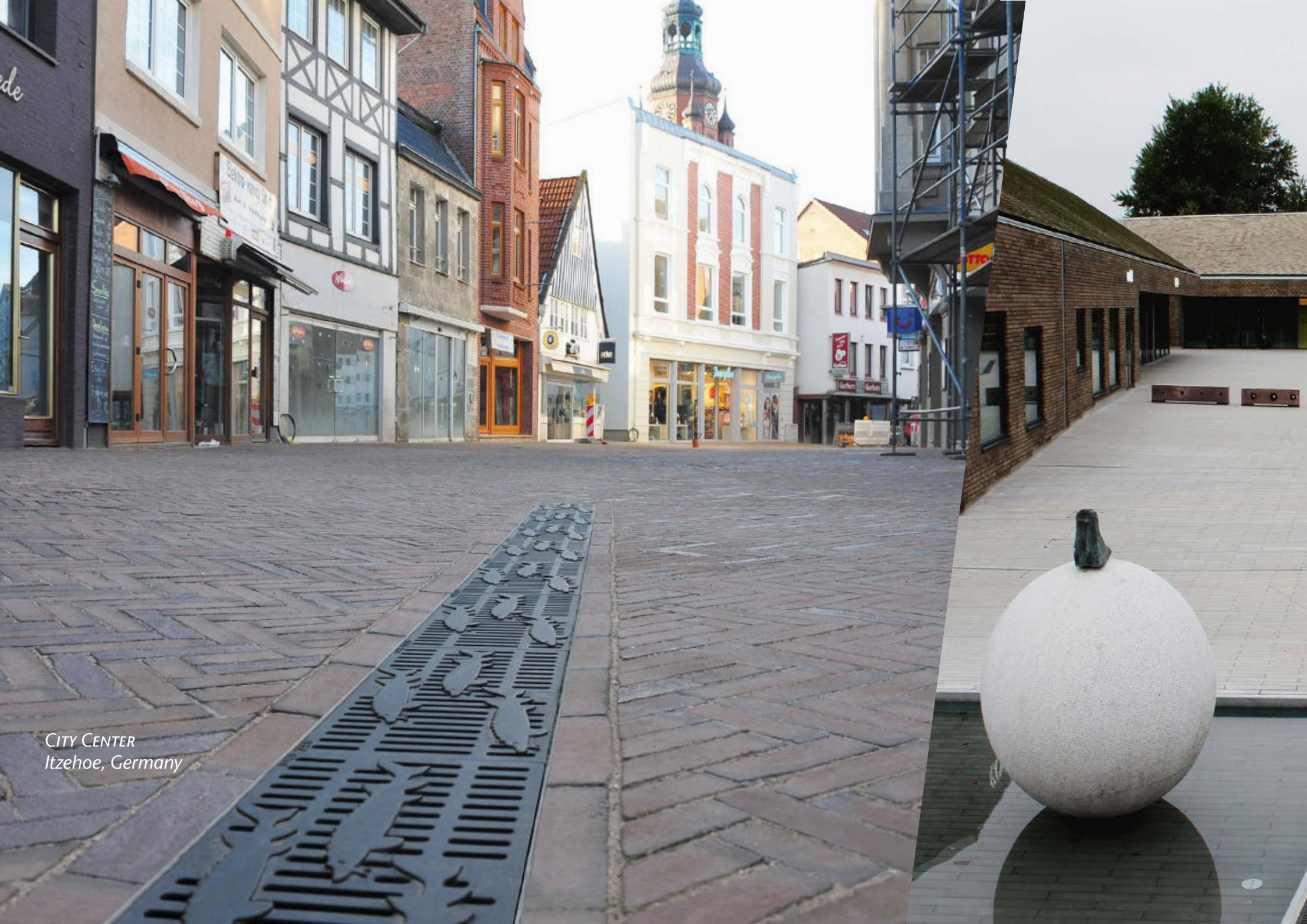


Drops
V300



Branches
V300





CITY CENTER
Itzehoe, Germany



*Toosby Torv ECCO
Bredebro, Denmark*



*CITY CENTER
Flensburg, Germany*





Pedestrian, Landscaping, Parks

ACO SlotTop

Design with clear lines

ACO provides architects and designers with a solution for a very discreet drainage.

Design with clear lines, discreet and unobtrusive, the slot frame opens up new possibilities for open space planning. A narrow slot replaces the grate and forms a clear, inconspicuous joint in the surface. As a design element, this line can discreetly follow the course of the architectural complex. The system is also ideal for use as a transition between different surface materials.

ACO SlotTop

The system

Slot Top Single

- Available in galvanized steel or stainless steel, nominal widths 100, 150 and 200 mm
- Load classes C 250 and D 400
- Slot width 10 mm

SlotTop Double

- Available in galvanized steel or stainless steel, nominal width 100 mm
- Load class C 250
- Slot width 2 x 8 mm

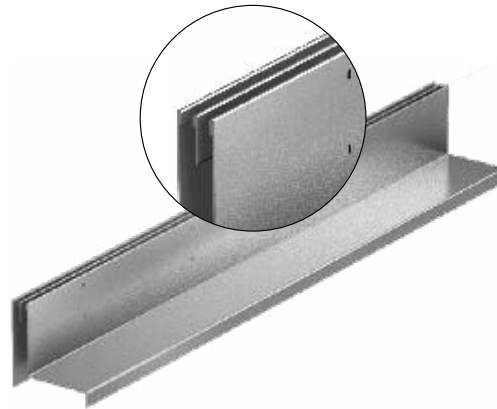
SlotTop Triple

- Available in galvanized steel or stainless steel, nominal width 100 mm
- Load class C 250
- Slot width 3 x 8 mm

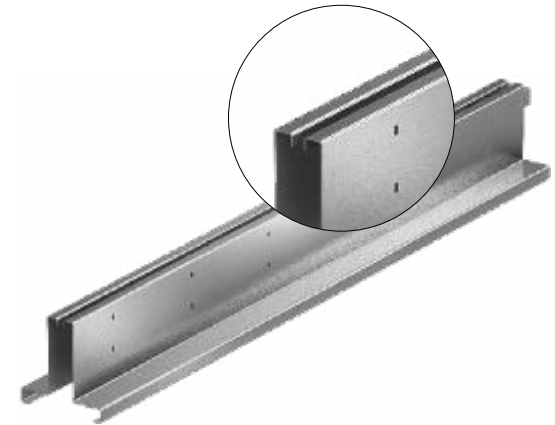
Slot Top Strip

- Available in galvanized steel or stainless steel, nominal width 100 mm
- Load class C 250
- Slot width 10 mm

Double



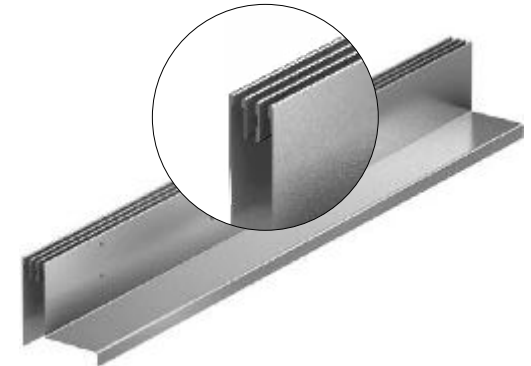
Strip

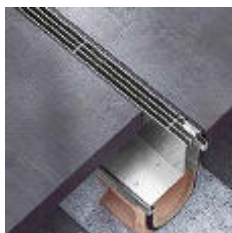


Single



Triple







*GARE DES GUILLEMINS
Liege, Belgium*



*RIPPERDA BARRACK
Haarlem, Nederlands*



SCHWABINGER BOULEVARD
Munich, Germany



ENSCHEDESESTRAAT
HENGELO, Netherlands

STAD mag ik u groeten * hier in het centrum van deze werkstad * het hart van Hengelo * metastad in Twente
en komen * de oren gespits * de tongval naar beneden gericht * mag ik u groeten hier * in verschillende banen * wijk
- wij * de geschiedenis niet vergeten * de vraag groter maken * laten we onze kinderen koesteren * hier de toekomst



Pedestrian, Landscaping, Parks

ACO EXODRAIN®

CorTen Steel Gratings

Combine a warm natural feel and modern design. CorTen is a weather-resistant steel widely used in urban architecture, art but also in the lining of the buildings.

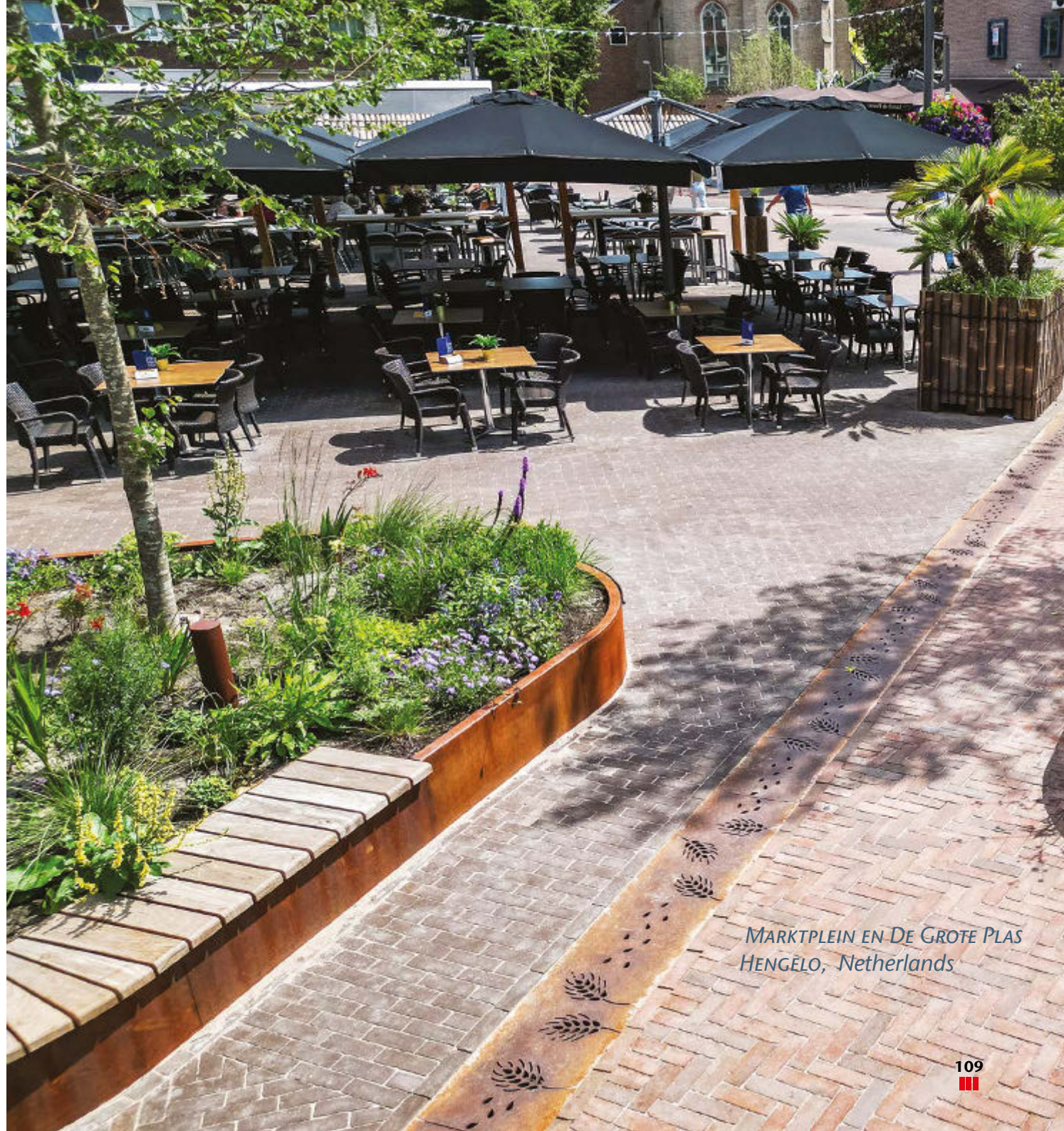
The CorTen gratings are a great match with paved surfaces giving a modern appearance of the city, but at the same time preserving the old spirit.

ACO ExoDrain

Product advantages

- The ACO ExoDrain consists of an external (EXO) “skeleton” made of CorTen steel. This skeleton is filled with concrete and reinforcement, creating an extremely strong construction that offers many advantages.
- On a load-bearing road foundation, the ExoDrain is completely “self-supporting” and therefore does not require a concrete foundation or further lateral addition with concrete. This has major advantages for ease of processing, minimizing placement errors and maximizing placement speed.
- Channel width and height can be adjusted to bespoke solutions. Due to the choice of materials and manufacturing technology, it is also possible to manufacture longer elements (up to 3 meters), as well as radius and corner pieces.





MARKTPLEIN EN DE GROTE PLAS
HENGEL, Netherlands



ECUPLAIN
Amsterdam, Netherlands



HEERLEN CENTRUM
Heerlen, Netherlands

KANAAL NOORD
Apeldoorn, Netherlands



CALEA VICTORIEI
Bucharest, Romania



Pedestrian, Landscaping, Parks

ACO Qmax

Slot drainage with high hydraulic capacity

ACO Qmax is a slot drainage system that ensures the highest hydraulic capacity. This intelligent system is designed for the effective storage, retention and release of large quantities of rain water.

ACO Qmax® meets the requirements for a flexible slot drainage system for the minimum load class A15 until load class F900.

ACO Qmax

Advantages of the system

- Manufactured from MDPE for strong and corrosion resistant structure
- Optimal cross section for maximum hydraulic capacity and self-cleaning effect
- Certified for highest load class F900 according to EN 1433
- Choice of three different edge rails according to the surface
- Choice of six different sizes for optimal drainage for step system installation

Patented "Pavement beam" feature permits continuous flow of concrete through the system for strong and economic installation

Lightweight material and design for easy manual handling and fast installation

2.0 m elements for minimum connections and fast installation

Channel provided with all components

The ACO Qmax® 550, 700 and 900 channels are provided with wingnut connection

Simple push fit channel connection detail for easy edge rail alignment

Integrated channel seal for quick and easy watertight connections

Channels can be cut at predetermined lengths

Ultra stiff rib design for high strength during handling and installation





Access chamber



End caps close the system
or provide connection to
drainage network



MDPE connectors for step system
design and uninterrupted finish



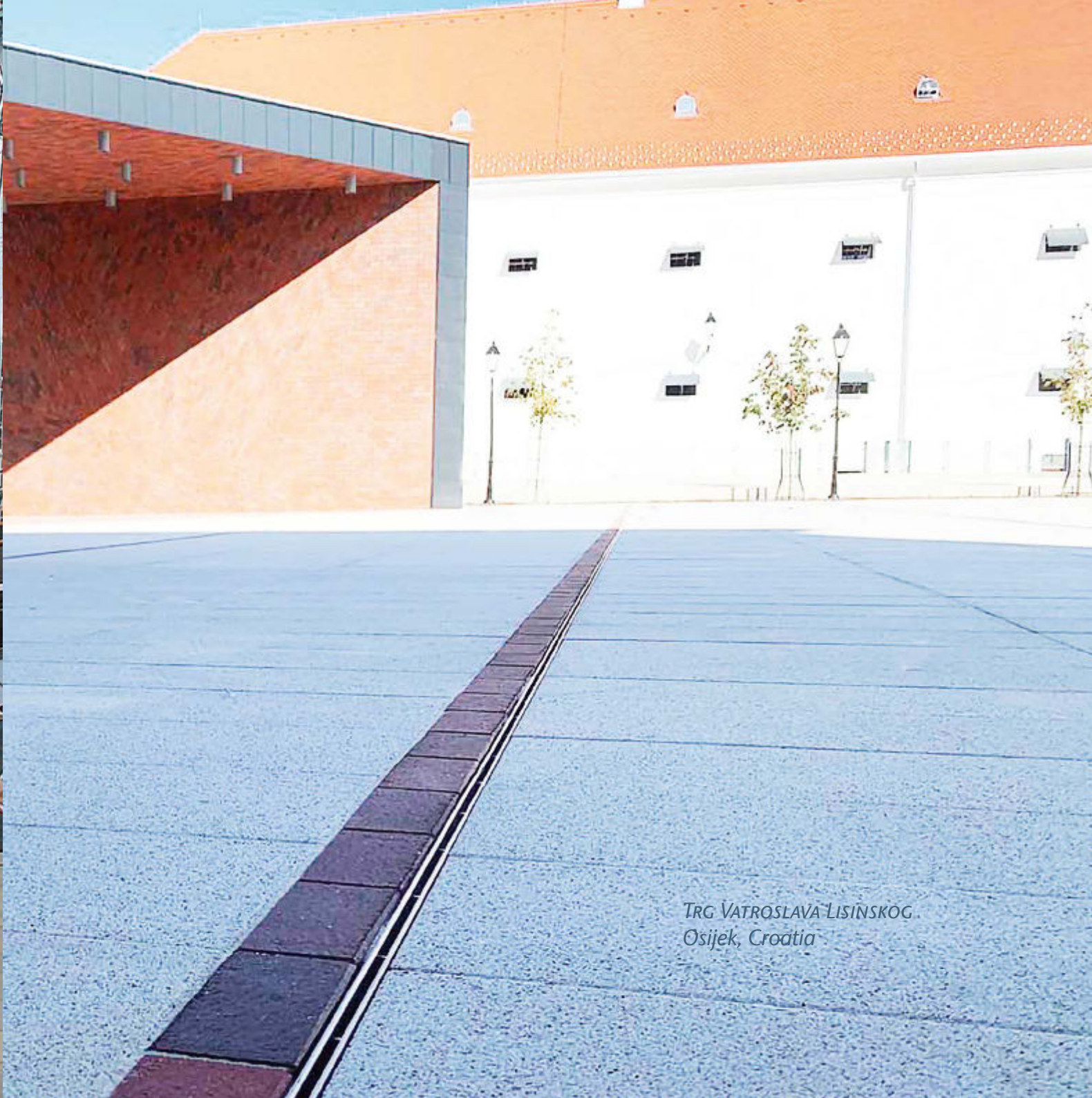


CITY CENTER
Cluj-Napoca, Romania





*CUTTY SARK GARDENS
London, UK*



*TRG VATROSLAVA LISINSKOG
Osijek, Croatia*



*SERVISNI CENTAR
Croatia*



Pedestrian, Landscaping, Parks

ACO Monoblock PD

Monolithic drainage channels

ACO Monoblock is a drainage channel that is built to withstand extreme conditions due to innovative manufacturing technology.

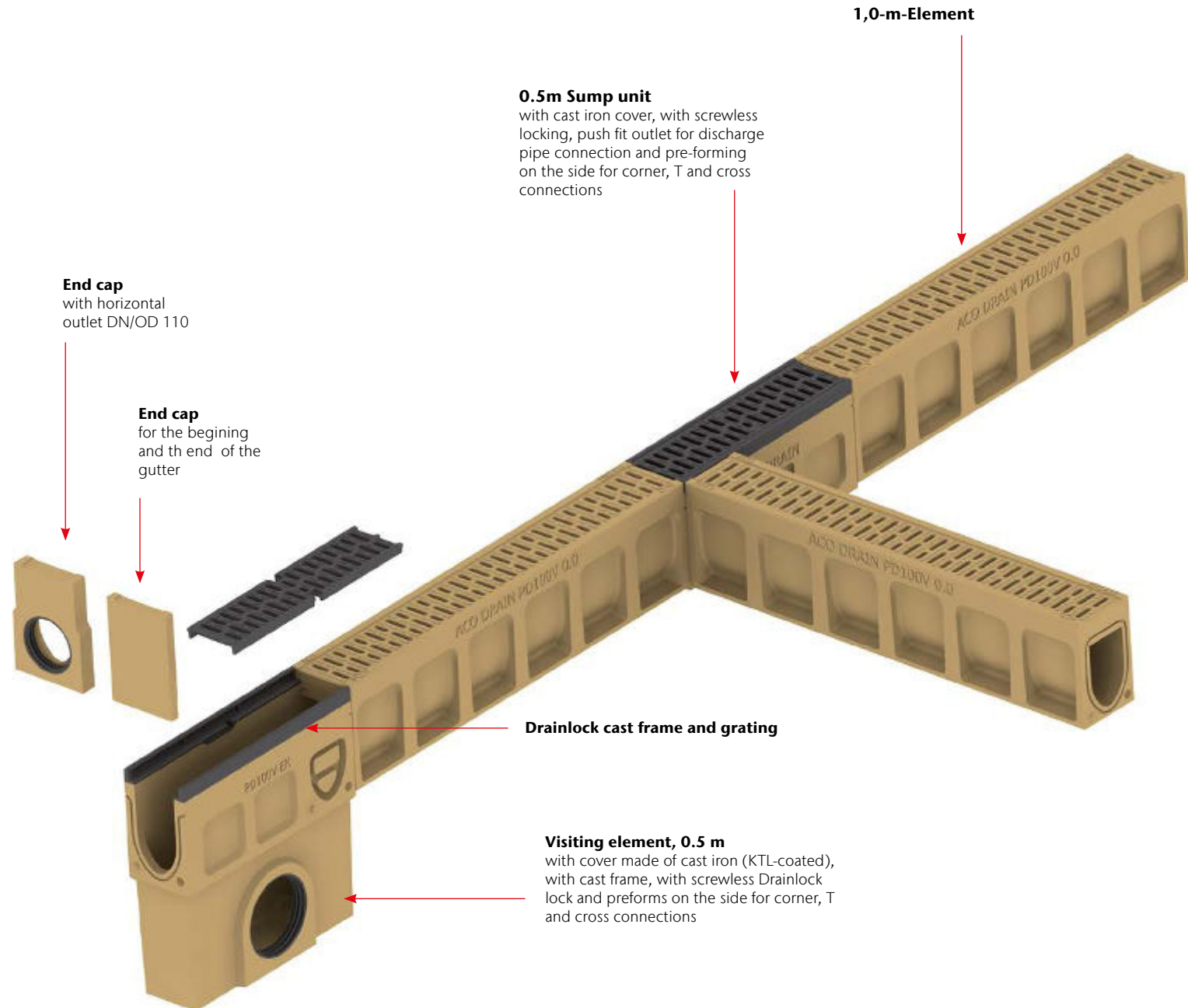
The monolithic structure the ACO Monoblock system guarantees optimal stability and protection against vandalism. The channels are available in two colors - natural and black anthracite, to meet the aesthetic requirements of the project.

The simplified modular system offers freedom in design and installation. Thus, ACO Monoblock satisfies the wishes of everyone - from plumbing designers and architects to contractors and investors, guaranteeing the desired security.

ACO Monoblock PD

Advantages of the system

- Monolithic system for transverse and longitudinal drainage
- Manufactured from polymer concrete for low weight and high chemical resistance
- V-shaped cross section for maximum hydraulic capacity and self-cleaning effect
- Watertight and smooth material
- Options for inbuilt slope steps
- Easy access and maintenance
- Both collection and distribution
- Better durability compared to the grated channels
- Simplified installation by simply cutting sections to length and the universal laying direction





1.0 m element



Sump unit 0.5 m



End cap



End cap with horizontal outlet



*CAPITAL FORT
Sofia, Bulgaria*



*THE OFFICE
Cluj, Romania*



*UEBELBACH
Bösebach, Austria*



LARGO
Sofia, Bulgaria



SOUTH PERTH
Australia



Pedestrian, Landscaping, Parks

ACO Paving Access Covers

Access covers with embedding of paving materials

All systems and installations remain hidden under the access covers. The structure of the ACO Paving Access Covers system allows embedding of flooring in the cover frame. This provides freedom for designing areas with natural stone, paving slabs, asphalt or other architectural solutions without visually interrupting the surface while guaranteeing a smooth surface and stability of the cover, in compliance with European standards.

ACO Paving Access Covers

Product advantages

- Variety of materials and dimensions
- Lockable for protection against vandalism and unauthorized access to the shaft
- Manufactured to size on request
- Rubber seal for watertightness and odor containment



C250/D400

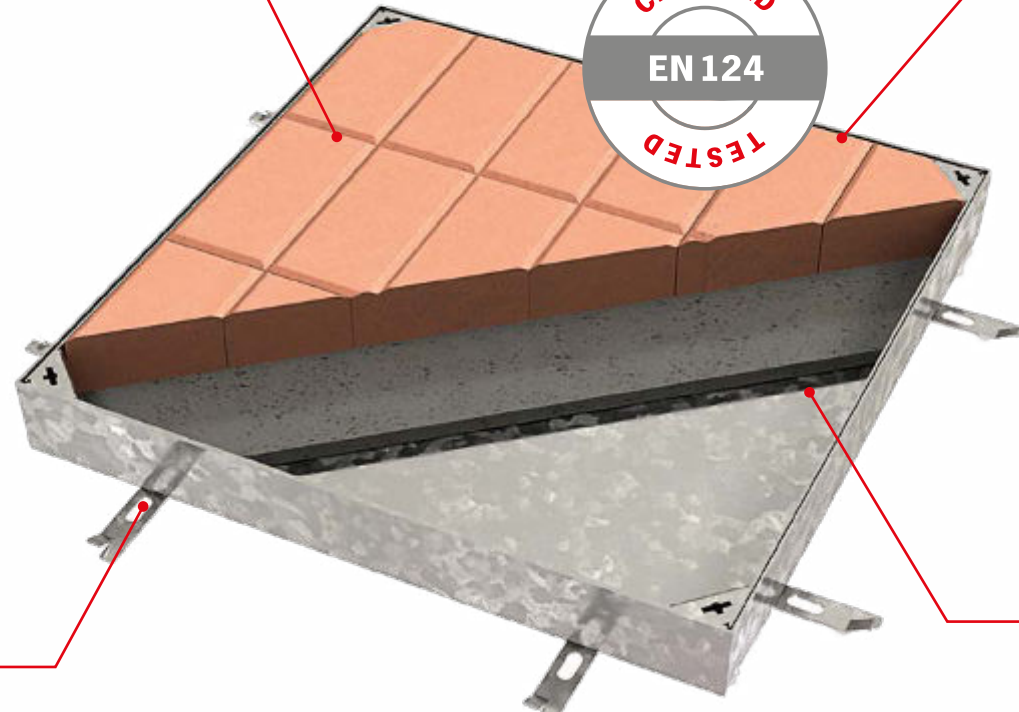
Load class D400 for all clear openings of up to 1m

Space for filling with paving stones, natural stone or bituminous filler material to a height of 120 mm



Sturdy welded support elements under the cover

No need for concrete or other structural filler





ACO Paving GS



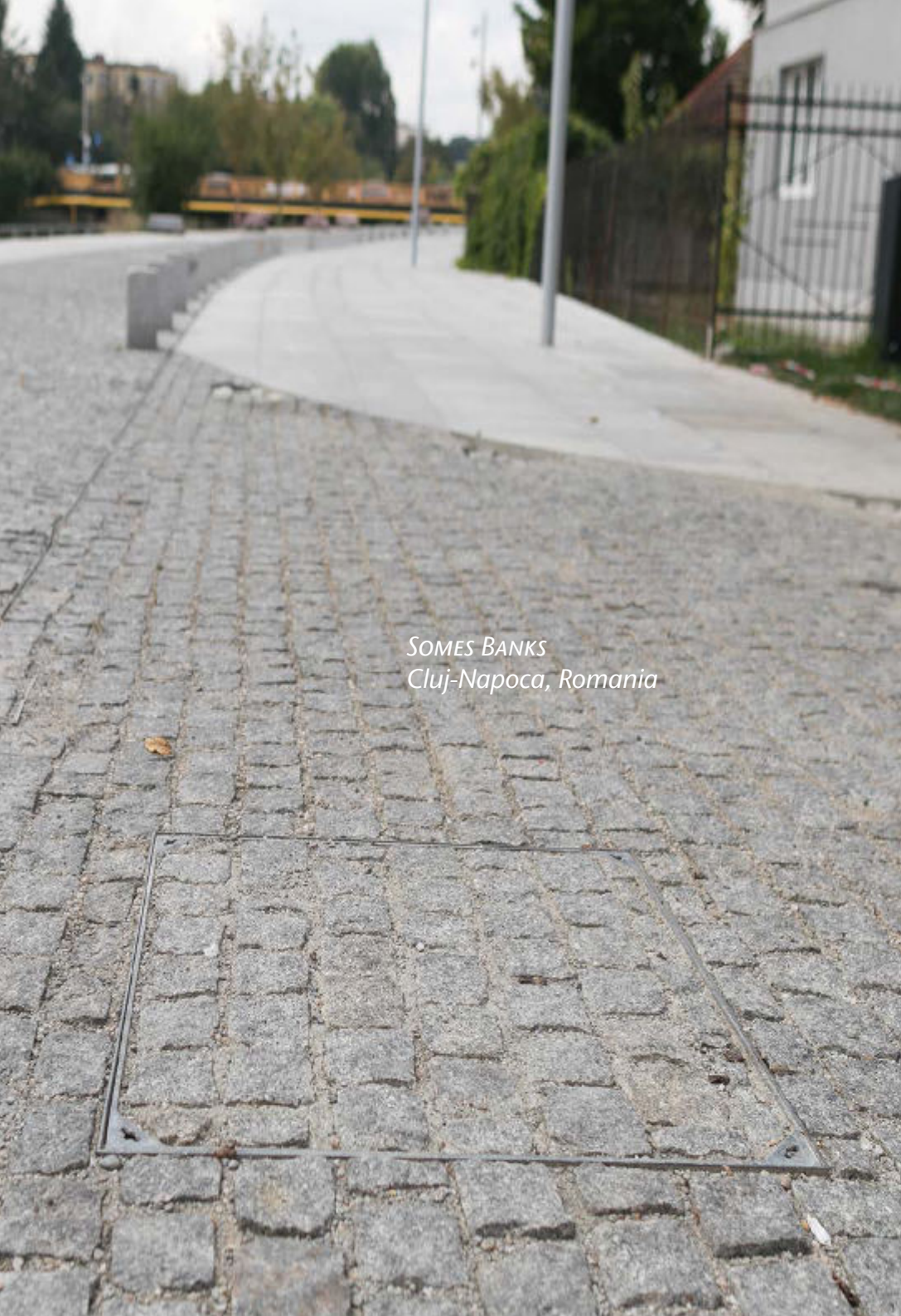
ACO Paving Assist GS

- Option for easy opening system
- Hinges and gas shock absorbers
- Locking with two bolts
- Option for stainless steel version (1.4301 or 1.4571)





STUDENTŲ SKVERAS
Kaunas, Lithuania



*SOMES BANKS
Cluj-Napoca, Romania*



*VILNIAUS
Šiauliai, Lithuania*



AUFFAHRT
Braunfels, Germany



Pedestrian, Landscaping, Parks

ACO Self[®] Board & Gravel

Grass and gravel stabilisation systems

In addition to a wide range of drainage solutions, ACO's product portfolio includes a variety of products that satisfy modern regulations and trends for sustainable design and preservation of natural surfaces that allow water infiltration into the soil.

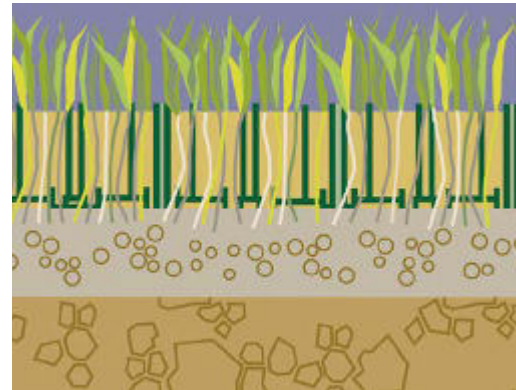
The stabilisation systems are ideal for use in walkways or driveways where natural grass or decorative gravel is required. This prevents the formation of bumps and ruts and prevents damage to soil and plants. At the same time, the surface is stable and even for smooth vehicular and foot traffic.

ACO Self[®] Board

Product advantages

- prevents displacement of pavement, including gravel and soil
- quick and easy installation, thanks to lightweight modular system elements
- stable under light vehicle traffic
- additional accessories: lawn edging and elements for marking parking spaces
- Made of 100% recycled material
- Economical - compared to asphalt and concrete pavements
- UV resistance for longer system life

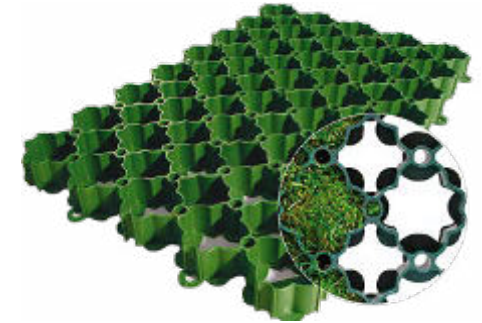
Pavement layering for green parking:



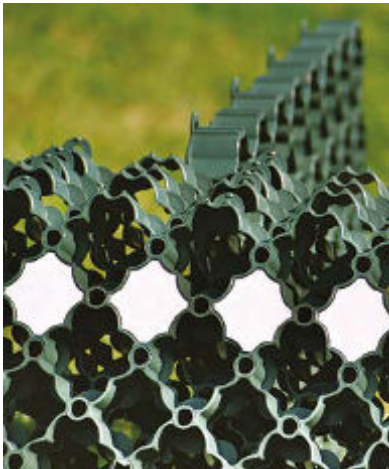
— ACO Board pavement filled with soil

— Fine sand 3-5 cm thick

— Water permeable base layer from 15 to 45 cm (depending on capacity)



Elements for marking parking lots



- Edging for lawns - prevents the displacement of pavement or gravel due to temperature differences and dynamic loads from vehicle traffic
- Accessories for landscaping parking - white elements for marking and visual separation of individual grassy areas and parking lots

ACO Self[®] Gravel

Product advantages

- Extremely easy soil reinforcement system
- Eliminates the risk of erosion with frequent use
- Geotextile system that prevents weeds and contributes to easy installation
- Suitable for light vehicle traffic
- Made of 100% polypropylene (PP)



ACO Self[®] restraining profile - for smooth transition between different types of paving materials





BAUMSCHUTZROSTE
Berlin, Germany



Pedestrian, Landscaping, Parks

ACO Wotan

Protective grids for trees

Protection for plants and aesthetic appearance - both tasks are successfully fulfilled by ASO street tree systems. Protective grids provide favorable living conditions for trees in the urban environment.

The ACO WOTAN system, proven over time, allows freedom in the choice of shape and dimensions. The system does not require additional structure. The basic model consists of a grid of parts with a height of 6 cm. The elements are made of cast iron, which does not need additional maintenance during the period of operation, and are secured against vandalism with a special locking mechanism.

ACO Wotan

Product advantages

- High variability in shape and size
- Sizes up to a side length of over 4m
- Self-supporting without substructure
- Low construction height (6 cm)
- Adaptable to the enlarged trunk circumference of the tree
- Slot width 18 mm
- Consists of high-quality nodular cast iron
- EN-GJS 400 DIN EN 1563
- Load capacity: up to 50 kN unbraked wheel load
- Tree guards available

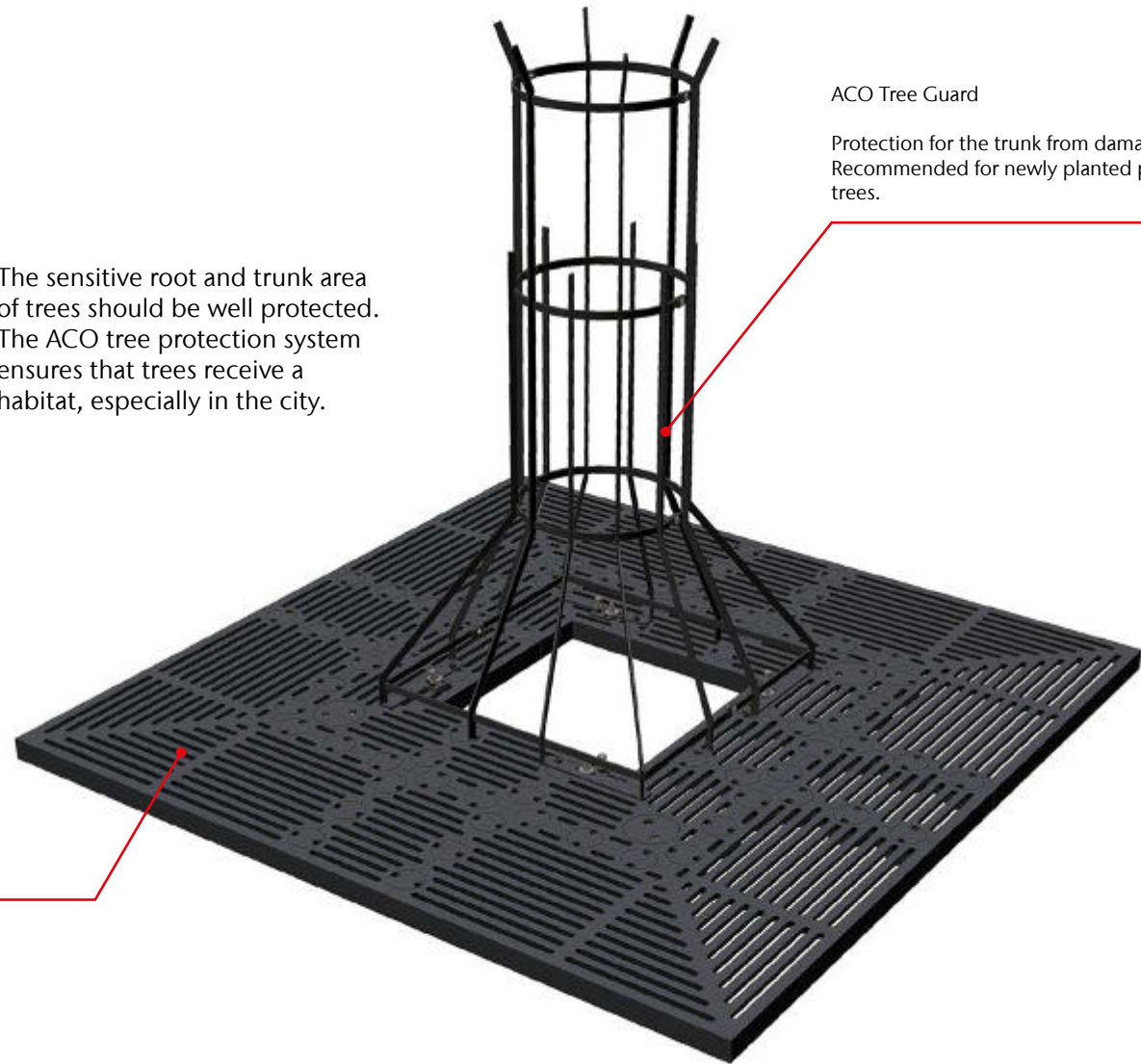
The sensitive root and trunk area of trees should be well protected. The ACO tree protection system ensures that trees receive a habitat, especially in the city.

ACO Tree Guard

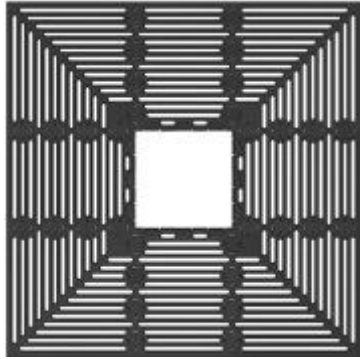
Protection for the trunk from damage. Recommended for newly planted plants trees.

ACO Tree Grills Wotan

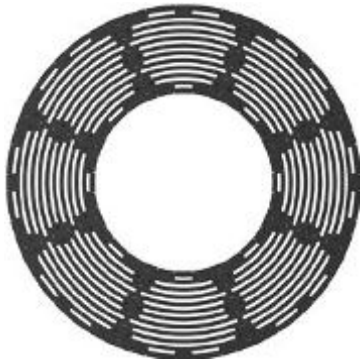
Protecting the root area from soil compaction. Different shapes available. Can be used without a substructure.



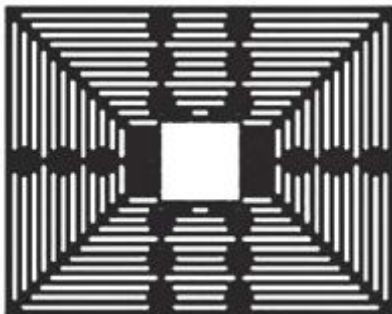
Square TreeGrills



Round TreeGrills



Rectangular TreeGrills



*HOLLERSTRABE
Hamburg, Germany*



*EDUARD-WALLNÖFER-PLATZ
Innsbruck, Austria*



Hamburg, Germany



askACO



ACO Online

Find our products with all important information on the ACO website. Here you will find the technical descriptions, product information, specification texts and installation details you will need during the design planning phase.

www.aco.com.tr

Welcome to the ACO Academy!

The ACO Academy not only offers up-to-date information with a practical focus, it also focuses on future challenges and opportunities. In addition to events held at our office, the ACO Academy's annual programme features events across the country to unite the construction industry in its vision "Together for a New Sustainable Urban Environment."

sales@aco.com.tr

ACO Design Team

For complete technical support in specifications and dimensioning of a drainage system with specialized software, it is at your disposal ACO Surface Water Management Design Team.

info@aco.com.tr

ACO. we care for water

